

# HP High Performance Clusters LC 2000 Series Design and Configuration Guide



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# Introduction

## **Summary:**

The LC 2000 Series Design and Configuration Guide provides an easy and flexible way to design High Performance Computing (HPC) clusters. It is easy to design an HPC cluster with this guide because everything needed for the cluster is specified through Reference Designs. The flexible process provides the ability to fully configure the cluster by selecting the number of compute nodes in the cluster, type of cluster interconnect network, processor types, processor speeds, other server options, storage subsystems, storage options, and software options.

## **Reference Designs:**

The LC 2000 Series Cluster Reference Designs in this guide serve as the foundation for designing an HPC cluster. The Reference Designs include wiring diagrams of the three cluster networks: In Band (IB) and Out of Band (OOB) management networks and the cluster interconnect network. The Reference Designs contain rack configurations detailing component placement in the racks and the location of the potential expansion compute nodes and switches. The Reference Designs also provide comprehensive parts lists to assist you in the order process. The parts lists include all of the part numbers and part descriptions, along with their respective quantities, needed to build an LC 2000 Series Cluster. The Reference Designs are distinguished from one another by the types and sizes of the cluster interconnect network switch. The types of cluster interconnect networks supported by the LC 2000 Series Clusters are: Myrinet, Gigabit Ethernet and Fast Ethernet. Each cluster interconnect network switch supports a certain range of compute nodes and can be expanded to some maximum number of compute nodes.

## **Using the Design and Configuration Matrix:**

The LC 2000 Series Design and Configuration Matrix assists in selecting an LC 2000 Series Cluster Reference Design to be customized to meet your needs. By utilizing three basic inputs, the LC 2000 Series Design and Configuration Matrix helps define the most cost efficient cluster interconnect network switch solution while satisfying both your current compute node count configuration needs and future compute node count expansion plans.

The three basic inputs needed to define the cluster configuration are located in the first three columns of the Design and Configuration matrix. Select a Cluster Interconnect Network, the number of Compute nodes to make up the cluster, and the maximum number of Compute nodes you may expand the cluster to in the future. Each selection from left to right narrows down the potential options. Once the three selections are made, the result on the right hand side of the matrix is a particular Reference Design and Reference Parts List as well as the page(s) to find them on. The resulting page(s) provide(s) a detailed reference wiring diagram, a reference rack configuration diagram, and a Reference Parts List. Refer to the quantity column of the Reference Parts List whose range includes the selected compute node count. Each quantity column encompasses an entire cluster solution. (Note: Use only the column for your desired node count.) Once the correct column quantity is selected, record the quantities needed for each part in the appropriate cluster interconnect network Order Worksheet. Order Worksheets for each cluster interconnect network are included in this document to assist in recording the quantities needed to order the LC 2000 Series Cluster. Where prompted, substitute the number of compute nodes selected for the # sign in the simple equations.

An Options Worksheet is also available in this document to order hardware options for the DL380 (Control node) and DL360 (Compute node). Options include, but are not limited to, additional processors, memory and disk capacity. All Compute nodes must be identically configured.

**Software Options:**

Software options such as operating system media and licenses are available. Please refer to the LC 2000 Series Software Options worksheet for part numbers and quantities. The operating system options available with the LC 2000 Series Clusters include Red Hat 3 one year and three year licenses, SLES 8 one year and three year licenses, and Microsoft Windows Server 2003. Separate part numbers are provided for Control and Compute nodes. When ordering Red Hat 3 and SLES 8, the first group of eight compute nodes require a special part number to be ordered that contains the media, HP Care Pack, and the base eight licenses. The licenses for the additional groups of eight compute nodes should be ordered using the separate part number indicated in the Software Options table. The licenses for Microsoft Windows come in bundles of 16 for the Compute nodes.

Scali Manage/Connect software is also available. The appropriate Control node media and license and the correct number of Compute node licenses must be ordered. Scali Manage/Connect is supported on Linux operating systems only.

**Storage Subsystems:**

Storage Subsystems are also available for the compute cluster. In the LC 2000 Series Design and Configuration Guide, several Storage Subsystems have been defined with wiring diagrams, rack configurations, and Reference Parts Lists. The Storage Subsystems are attached to the compute cluster via the In Band Gigabit Ethernet network. If you would like to select one of the Storage Subsystems, simply place the order using the appropriate Reference Parts List.

To add storage options, please refer to the Storage Subsystem Options worksheet.

**Using the Upgrade Worksheets:**

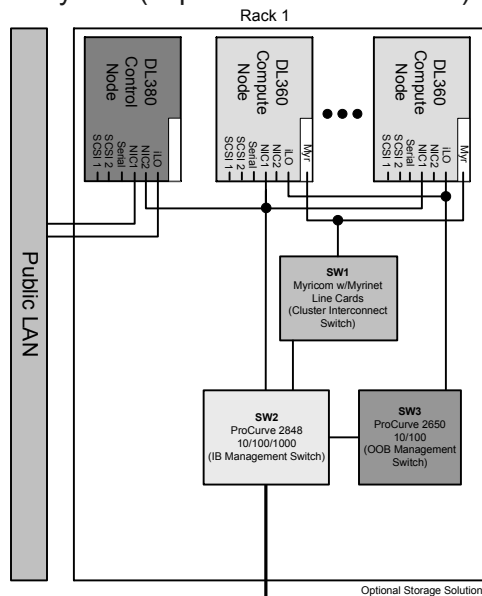
There are Upgrade Worksheets for each cluster interconnect network included in this document. Each Reference Design has its own maximum expandability as illustrated by the LC 2000 Series Design and Configuration Matrix and listed on each LC 2000 Series Cluster Reference Design page. To expand your Compute node count, find the correct cluster interconnect network Upgrade Worksheet and fill out the Current Configuration column and the New Configuration column using the appropriate Reference Parts List. Depending on the situation, these two inputs could come from separate quantity columns but will always come from the same Reference Design. Then subtract the quantity of each part in the Current Configuration column from each part in the New Configuration column, and enter the difference in the Parts Needed column. The generated Parts Needed column provides you with exactly the necessary parts to achieve your new configuration.

## LC 2000 Series Design and Configuration Matrix

Select			Result		
Cluster Interconnect Network	# of Compute Nodes	Maximum Future Expansion	Reference Design	Reference Parts List	Pages
Myrinet	1 - 32	32	16 Node Myrinet	1 - 32 Nodes	6
	1 - 64	64	32 Node Myrinet	1 - 32 Nodes	7
				33 - 64 Nodes	7
	29 - 128	128	64 Node Myrinet	29 - 68 Nodes	8 - 9
				69 - 108 Nodes	8 - 9
				109 - 128 Nodes	8 - 9
GigE	1 - 22	22	16 Node GigE	1 - 22 Nodes	11
	1 - 36	36	24 Node GigE	1 - 36 Nodes	12
	1 - 64	64	32 Node GigE	1 - 32 Nodes	13
				33 - 64 Nodes	13
	29 - 128	128	64 Node GigE	29 - 68 Nodes	14 - 15
				69 - 108 Nodes	14 - 15
				109 - 128 Nodes	14 - 15
Fast Ethernet	1 - 22	22	16 Node FE	1 - 22 Nodes	17
	1 - 36	36	24 Node FE	1 - 36 Nodes	18
	1 - 32	72	32 Node FE	1 - 32 Nodes	19
	33 - 192	192	64 Node FE	33 - 72 Nodes	20 - 21
				73 - 112 Nodes	20 - 21
				113 - 152 Nodes	20 - 21
				153 - 192 Nodes	20 - 21

# LC 2000 Series 16 Node Myrinet DL360 Cluster Reference Design

## Myrinet (expandable to 32 nodes)



42	
41	
40	S 33 Expansion
39	S 32 Expansion
38	S 31 Expansion
37	S 30 Expansion
36	S 29 Expansion
35	S 28 Expansion
34	S 27 Expansion
33	S 26 Expansion
32	S 25 Expansion
31	S 24 Expansion
30	S 23 DL380
29	
28	S 22 Expansion
27	S 21 Expansion
26	S 20 Expansion
25	S 19 Expansion
24	S 18 Expansion
23	S 17 Expansion
22	SW 3 ProCurve 2650
21	SW 2 ProCurve 2848
20	TFT5600
19	S 16 DL360
18	S 15 DL360
17	S 14 DL360
16	S 13 DL360
15	S 12 DL360
14	S 11 DL360
13	S 10 DL360
12	S 9 DL360
11	S 8 DL360
10	S 7 DL360
9	S 6 DL360
8	S 5 DL360
7	S 4 DL360
6	S 3 DL360
5	S 2 DL360
4	S 1 DL360
3	Myricom 5 slot
2	SW 1 chassis w/Myrinet line cards
1	

Rack 1 (R1)

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

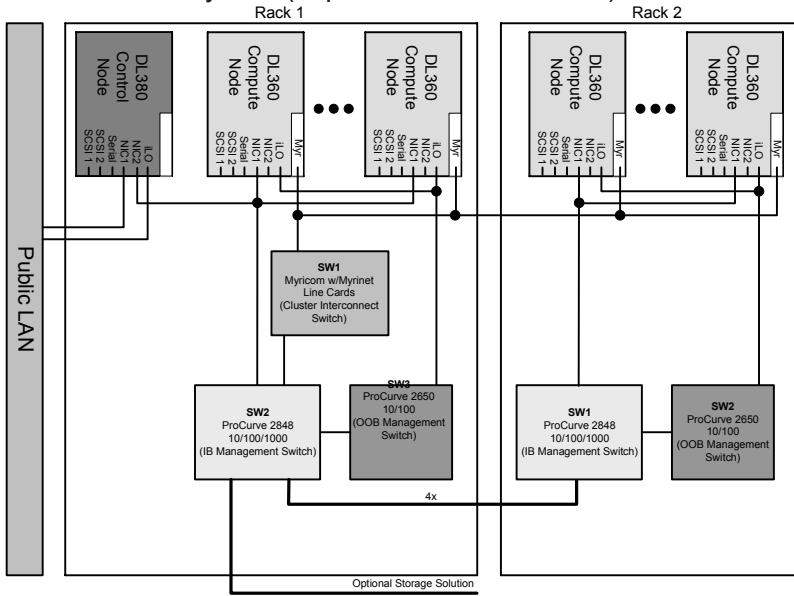
Notes: 1. # represents the number of compute nodes.

2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

Part Numbers	LC 2000 Series Parts List Myrinet	1 - 32 Nodes (32 Node Max)
Factory Integration		Quantity
325733-888	Level 4 Factory Integration	1
359578-B21	Configuration Resource Kit	1
DL380G3 Control Node		Quantity
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
DL360G3 Compute Nodes		Quantity
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM	
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM	#
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
257894-006	Myrinet Fiber PCI-X Single Port Adapter Card - M3F-PCIXD-2	
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	
IB / OOB Management Interconnect		Quantity
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	1
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1
Compute Interconnect		Quantity
257896-002	Myrinet 5-Slot Switch Frame, 3U, Max Support 32 Ports - M3-E32	1
257896-003	Myrinet 9-Slot Switch Frame, 5U, Max Support 64 Ports - M3-E64	
257896-004	Myrinet 17-Slot Switch Frame, 9U, Max Support 128 Ports - M3-E128	
257895-001	Myrinet 8-Port Fiber Switch Card With XBar - M3-SW16-8F *** Round up to the nearest integer.	# / 8
262818-001	Myrinet SNMP Monitoring Line Card, Dual Port - M3-M	1
337807-001	Myrinet Front Blanking Panel - M3-BLANK *** Round down to the nearest integer.	4 - # / 8
360363-B21	Myrinet Switch Rail Kit	1
Common Interconnect Parts		Quantity
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	2
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	3
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	# * 2 + 2
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	1
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2
221692-B22	Fiber Cable, LC-LC, OPTICAL, 5M	#
221692-B23	Fiber Cable, LC-LC, OPTICAL, 15M	
Rack and Power Components		Quantity
245161-B22	Rack 10642 (42U) Shock Pallet	1
221546-YYY	TFT5600RKM	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 8, then 1. If 8 < # <= 22, then 2. If # > 22, then 3.
246099-B21	Side Panel 42U, 10K Series All	1
246107-B21	Stabilizer 600mm, 10K Series All	1
248929-B21	Baying Kit, 10K Series All	
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(39 - #) / 10

# LC 2000 Series 32 Node Myrinet DL360 Cluster Reference Design

## Myrinet (expandable to 64 nodes)



Notes: 1. # represents the number of compute nodes.

2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

Part Numbers	LC 2000 Series Parts List Myrinet	1 - 32 Nodes (Expandable to 64 Nodes)	33 - 64 Nodes (64 Node Max)
Factory Integration		Quantity	Quantity
325733-888	Level 4 Factory Integration	1	2
359578-B21	Configuration Resource Kit	1	1
DL380G3 Control Node		Quantity	Quantity
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM		
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM		
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM		
DL360G3 Compute Nodes		Quantity	Quantity
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM		
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM		
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM		
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM		
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM		
257894-006	Myrinet Fiber PCI-X Single Port Adapter Card - M3F-PCIXD-2	#	#
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#	#
IB / OOB Management Interconnect		Quantity	Quantity
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	1	2
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1	2
Compute Interconnect		Quantity	Quantity
257896-002	Myrinet 5-Slot Switch Frame, 3U, Max Support 32 Ports - M3-E32		
257896-003	Myrinet 9-Slot Switch Frame, 5U, Max Support 64 Ports - M3-E64	1	1
257896-004	Myrinet 17-Slot Switch Frame, 9U, Max Support 128 Ports - M3-E128		
257895-001	Myrinet 8-Port Fiber Switch Card With XBar - M3-SW16-8F *** Round up to the nearest integer.	# / 8	# / 8
262818-001	Myrinet SNMP Monitoring Line Card, Dual Port - M3-M	1	1
337807-001	Myrinet Front Blanking Panel - M3-BLANK *** Round down to the nearest integer.	8 - # / 8	8 - # / 8
360363-B21	Myrinet Switch Rail Kit	1	1
Common Interconnect Parts		Quantity	Quantity
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	2	4
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	3	5
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	# * 2 + 2	# * 2 + 7
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	1	1
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2	2
221692-B22	Fiber Cable, LC-LC, OPTICAL, 5M	#	#
221692-B23	Fiber Cable, LC-LC, OPTICAL, 15M		
Rack and Power Components		Quantity	Quantity
245161-B22	Rack 10642 (42U) Shock Pallet	1	2
221546-YYY	TFT5600RKM	1	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 6, then 1. If 6 < # <= 20, then 2. If # > 20, then 3.	If # <= 44, then 4. If 44 < # <= 58, then 5. If # > 58, then 6.
246099-B21	Side Panel 42U, 10K Series All	1	1
246107-B21	Stabilizer 600mm, 10K Series All	1	
248929-B21	Baying Kit, 10K Series All		1
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(39 - #) / 10	(81 - #) / 10

42	S 33	DL360
41	S 32	DL360
40	S 31	DL360
39	S 30	DL360
38	S 29	DL360
37	S 28	DL360
36	S 27	DL360
35	S 26	DL360
34	S 25	DL360
33	S 24	DL360
32	S 23	DL360
31	S 22	DL360
30	S 21	DL380
29	S 20	DL360
28	S 19	DL360
27	S 18	DL360
26	S 17	DL360
25	S 16	DL360
24	S 15	DL360
23	SW 3	ProCurve 2650
22	SW 2	ProCurve 2848
21	TFT5600	
20	S 14	DL360
19	S 13	DL360
18	S 12	DL360
17	S 11	DL360
16	S 10	DL360
15	S 9	DL360
14	S 8	DL360
13	S 7	DL360
12	S 6	DL360
11	S 5	DL360
10	S 4	DL360
9	S 3	DL360
8	S 2	DL360
7	S 1	DL360
6	Myrinet 9 slot SW 1 chassis w/Myrinet line cards	
5		
4		
3		
2		
1		

Rack 1 (R1)

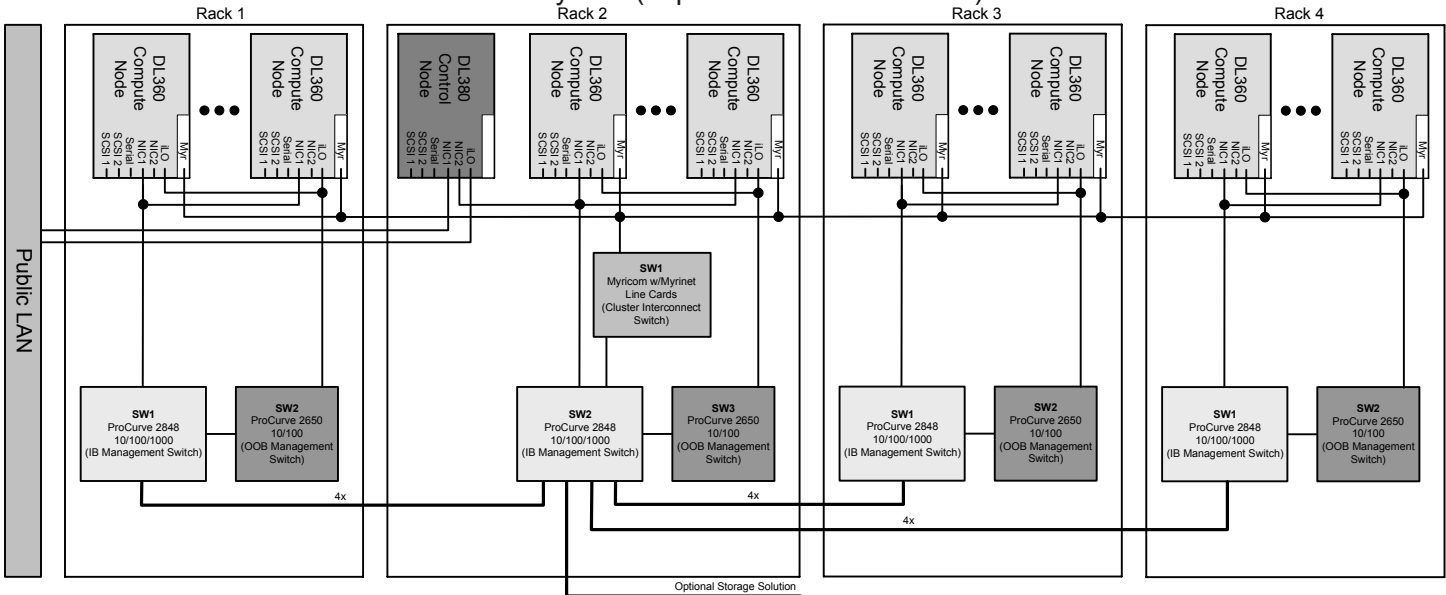
42		
41		
40		
39		
38		
37		
36		
35		
34	S 32	Expansion
33	S 31	Expansion
32	S 30	Expansion
31	S 29	Expansion
30	S 28	Expansion
29	S 27	Expansion
28	S 26	Expansion
27	S 25	Expansion
26	S 24	Expansion
25	S 23	Expansion
24	S 22	Expansion
23	S 21	Expansion
22	SW 2	Expansion
21	SW 1	Expansion
20	S 20	Expansion
19	S 19	Expansion
18	S 18	Expansion
17	S 17	Expansion
16	S 16	Expansion
15	S 15	Expansion
14	S 14	Expansion
13	S 13	Expansion
12	S 12	Expansion
11	S 11	Expansion
10	S 10	Expansion
9	S 9	Expansion
8	S 8	Expansion
7	S 7	Expansion
6	S 6	Expansion
5	S 5	Expansion
4	S 4	Expansion
3	S 3	Expansion
2	S 2	Expansion
1	S 1	Expansion

Rack 2 (R2)

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

# LC 2000 Series 64 Node Myrinet DL360 Cluster Reference Design

## Myrinet (expandable to 128 nodes)



42	S 40	Expansion	42	S 29	DL360	42	S 40	Expansion	42	
41	S 39	Expansion	41	S 28	DL360	41	S 39	Expansion	41	
40	S 38	Expansion	40	S 27	DL360	40	S 38	Expansion	40	
39	S 37	Expansion	39	S 26	DL360	39	S 37	Expansion	39	
38	S 36	DL360	38	S 25	DL360	38	S 36	Expansion	38	
37	S 35	DL360	37	S 24	DL360	37	S 35	Expansion	37	
36	S 34	DL360	36	S 23	DL360	36	S 34	Expansion	36	
35	S 33	DL360	35	S 22	DL360	35	S 33	Expansion	35	
34	S 32	DL360	34	S 21	DL360	34	S 32	Expansion	34	
33	S 31	DL360	33	S 20	DL360	33	S 31	Expansion	33	
32	S 30	DL360	32	S 19	DL360	32	S 30	Expansion	32	
31	S 29	DL360	31	S 18	DL360	31	S 29	Expansion	31	
30	S 28	DL360	30	S 17	DL380	30	S 28	Expansion	30	
29	S 27	DL360	29	S 16	DL360	29	S 27	Expansion	29	
28	S 26	DL360	28	S 15	DL360	28	S 26	Expansion	28	
27	S 25	DL360	27	S 14	DL360	27	S 25	Expansion	27	
26	S 24	DL360	26	S 13	DL360	26	S 24	Expansion	26	
25	S 23	DL360	25	S 12	DL360	25	S 23	Expansion	25	
24	S 22	DL360	24	S 11	DL360	24	S 22	Expansion	24	
23	S 21	DL360	23	S 10	DL360	23	S 21	Expansion	23	
22	SW 2 ProCurve 2650		22	SW 3 ProCurve 2650		22	SW 2 Expansion	22	SW 2 Expansion	
21	SW 1 ProCurve 2848		21	SW 2 ProCurve 2848		21	SW 1 Expansion	21	SW 1 Expansion	
20	S 20	DL360	20	S 19	DL360	20	S 20	Expansion	20	S 20 Expansion
19	S 19	DL360	19	S 18	DL360	19	S 19	Expansion	19	S 19 Expansion
18	S 18	DL360	18	S 17	DL360	18	S 18	Expansion	18	S 18 Expansion
17	S 17	DL360	17	S 16	DL360	17	S 17	Expansion	17	S 17 Expansion
16	S 16	DL360	16	S 15	DL360	16	S 16	Expansion	16	S 16 Expansion
15	S 15	DL360	15	S 14	DL360	15	S 15	Expansion	15	S 15 Expansion
14	S 14	DL360	14	S 13	DL360	14	S 14	Expansion	14	S 14 Expansion
13	S 13	DL360	13	S 12	DL360	13	S 13	Expansion	13	S 13 Expansion
12	S 12	DL360	12	S 11	DL360	12	S 12	Expansion	12	S 12 Expansion
11	S 11	DL360	11	S 10	DL360	11	S 11	Expansion	11	S 11 Expansion
10	S 10	DL360	10	S 9	DL360	10	S 10	Expansion	10	S 10 Expansion
9	S 9	DL360	9	S 8	DL360	9	S 9	Expansion	9	S 9 Expansion
8	S 8	DL360	8	S 7	DL360	8	S 8	Expansion	8	S 8 Expansion
7	S 7	DL360	7	S 6	DL360	7	S 7	Expansion	7	S 7 Expansion
6	S 6	DL360	6	S 5	DL360	6	S 6	Expansion	6	S 6 Expansion
5	S 5	DL360	5	S 4	DL360	5	S 5	Expansion	5	S 5 Expansion
4	S 4	DL360	4	S 3	DL360	4	S 4	Expansion	4	S 4 Expansion
3	S 3	DL360	3	S 2	DL360	3	S 3	Expansion	3	S 3 Expansion
2	S 2	DL360	2	S 1	DL360	2	S 2	Expansion	2	S 2 Expansion
1	S 1	DL360	1			1	S 1	Expansion	1	S 1 Expansion



# LC 2000 Series 64 Node Myrinet DL360 Cluster Reference Design

Notes: 1. # represents the number of compute nodes.

2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

Part Numbers	LC 2000 Series Parts List Myrinet	29 - 68 Nodes (Expandable to 128 Nodes)	69 - 108 Nodes (Expandable to 128 Nodes)	109 - 128 Nodes (128 Node Max)
	<b>Factory Integration</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
325733-888	Level 4 Factory Integration	2	3	4
359578-B21	Configuration Resource Kit	1	1	1
	<b>DL380G3 Control Node</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1	1	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM			
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM			
	<b>DL360G3 Compute Nodes</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#	#	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM			
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM			
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM			
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
257894-006	Myrinet Fiber PCI-X Single Port Adapter Card - M3F-PCIXD-2	#	#	#
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#	#	#
	<b>IB / OOB Management Interconnect</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	2	3	4
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	2	3	4
	<b>Compute Interconnect</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
257896-002	Myrinet 5-Slot Switch Frame, 3U, Max Support 32 Ports - M3-E32			
257896-003	Myrinet 9-Slot Switch Frame, 5U, Max Support 64 Ports - M3-E64			
257896-004	Myrinet 17-Slot Switch Frame, 9U, Max Support 128 Ports - M3-E128	1	1	1
257895-001	Myrinet 8-Port Fiber Switch Card With XBar - M3-SW16-8F *** Round up to the nearest integer.	# / 8	# / 8	# / 8
262818-001	Myrinet SNMP Monitoring Line Card, Dual Port - M3-M	1	1	1
337807-001	Myrinet Front Blanking Panel - M3-BLANK *** Round down to the nearest integer.	16 - # / 8	16 - # / 8	16 - # / 8
360363-B21	Myrinet Switch Rail Kit	1	1	1
	<b>Common Interconnect Parts</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	4	6	8
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	5	7	9
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	# * 2 + 7	# * 2 + 12	# * 2 + 13
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	1	1	1
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2	2	6
221692-B22	Fiber Cable, LC-LC, OPTICAL, 5M	#	#	If # < 120, then # else 120.
221692-B23	Fiber Cable, LC-LC, OPTICAL, 15M			If # < 120, then 0 else # - 120.
	<b>Rack and Power Components</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet	2	3	4
221546-YYY	TFT5600RKM	1	1	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1	1	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 40, then 4. If 40 < # <= 54, then 5. If # > 54, then 6.	If # <= 80, then 7. If 80 < # <= 94, then 8. If # > 94, then 9.	If # <= 120, then 10 else 11.
246099-B21	Side Panel 42U, 10K Series All	1	1	1
246107-B21	Stabilizer 600mm, 10K Series All			
248929-B21	Baying Kit, 10K Series All	1	2	3
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(81 - #) / 10	(123 - #) / 10	(165 - #) / 10

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

# LC 2000 Series Myrinet DL360 Cluster Order Worksheet

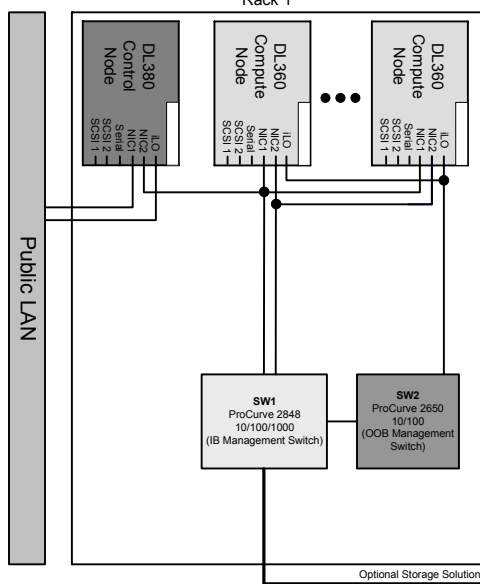
Note: Please make copies for future use.

Part Numbers	LC 2000 Series Parts List Fast Ethernet	1 - 22 Nodes (22 Node Max)
	<b>Factory Integration</b>	<b>Quantity</b>
325733-888	Level 4 Factory Integration	1
359578-B21	Configuration Resource Kit	1
	<b>DL380G3 Control Node</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
	<b>DL360G3 Compute Nodes</b>	<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM	
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#
	<b>IB / OOB Management Interconnect</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1
	<b>Compute Interconnect</b>	<b>Quantity</b>
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1
J4848A#WWW	Procurve 5372xl - 10/100-TX Switch, 8 Slot Modules, 5U, 3 Slots Filled	
J4820A	Procurve Switch XL 10/100-TX Switch Module, 24 Ports Per Module *** Round up to the nearest integer.	
	<b>Common Interconnect Parts</b>	<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	2
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	2
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	# * 3 + 1
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	1
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2
	<b>Rack and Power Components</b>	<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet	1
221546-YYY	TFT5600RKM	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 9, then 1 else 2
246099-B21	Side Panel 42U, 10K Series All	1
246107-B21	Stabilizer 600mm, 10K Series All	1
248929-B21	Baying Kit, 10K Series All	
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(39 - #) / 10

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

# LC 2000 Series 16 Node GigE DL360 Cluster Reference Design

## GigE (expandable to 22 nodes)



42		
41		
40		
39		
38		
37		
36		
35		
34		
33		
32		
31		
30	S 23	DL380
29		
28		
27		
26		
25	S 22	Expansion
24	S 21	Expansion
23	S 20	Expansion
22	SW 2	ProCurve 2650
21	SW 1	ProCurve 2848
20	TFT5600	
19	S 19	Expansion
18	S 18	Expansion
17	S 17	Expansion
16	S 16	DL360
15	S 15	DL360
14	S 14	DL360
13	S 13	DL360
12	S 12	DL360
11	S 11	DL360
10	S 10	DL360
9	S 9	DL360
8	S 8	DL360
7	S 7	DL360
6	S 6	DL360
5	S 5	DL360
4	S 4	DL360
3	S 3	DL360
2	S 2	DL360
1	S 1	DL360
U	Rack 1 (R1)	

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

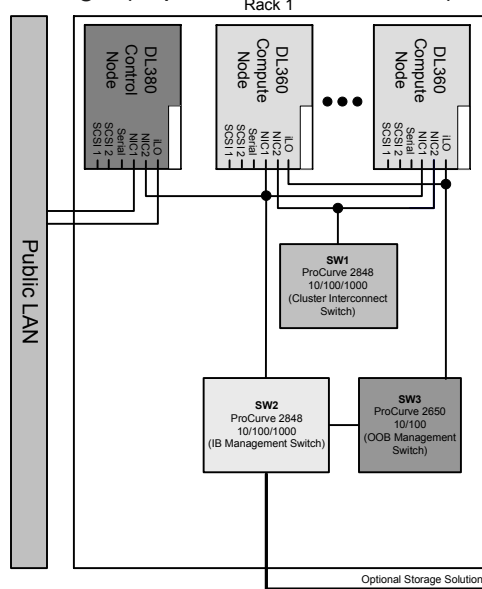
Notes: 1. # represents the number of compute nodes.

2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

Part Numbers	LC 2000 Series Parts List GigE	1 - 22 Nodes (22 Node Max)
<b>Factory Integration</b>		<b>Quantity</b>
325733-888	Level 4 Factory Integration	1
359578-B21	Configuration Resource Kit	1
<b>DL380G3 Control Node</b>		<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
<b>DL360G3 Compute Nodes</b>		<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM	
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#
<b>IB / OOB Management Interconnect</b>		<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1
<b>Compute Interconnect</b>		<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	1
257896-003	Myrinet 9-Slot Switch Frame, 5U, Max Support 64 Ports - M3-E64	
257896-004	Myrinet 17-Slot Switch Frame, 9U, Max Support 128 Ports - M3-E128	
356921-B21	Myrinet 8-Port GigE Switch Card With XBar - M3-SW16-8E *** Round up to the nearest integer.	
262818-001	Myrinet SNMP Monitoring Line Card, Dual Port - M3-M	
337807-001	Myrinet Front Blanking Panel - M3-BLANK *** Round down to the nearest integer.	
360363-B21	Myrinet Switch Rail Kit	
<b>Common Interconnect Parts</b>		<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	2
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	2
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	# * 3 + 1
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	1
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2
<b>Rack and Power Components</b>		<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet	1
221546-YYY	TFT5600RKM	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 9, then 1 else 2
246099-B21	Side Panel 42U, 10K Series All	1
246107-B21	Stabilizer 600mm, 10K Series All	1
248929-B21	Baying Kit, 10K Series All	
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(39 - #) / 10

# LC 2000 Series 24 Node GigE DL360 Cluster Reference Design

## GigE (expandable to 36 nodes)



42	S 37	Expansion
41	S 36	Expansion
40	S 35	Expansion
39	S 34	Expansion
38	S 33	Expansion
37	S 32	Expansion
36	S 31	Expansion
35	S 30	Expansion
34	S 29	Expansion
33	S 28	Expansion
32	S 27	Expansion
31	S 26	Expansion
30	S 25	DL380
29	S 24	DL360
28	S 23	DL360
27	S 22	DL360
26	S 21	DL360
25	S 20	DL360
24	S 19	DL360
23	S 18	DL360
22	SW 3	ProCurve 2650
21	SW 2	ProCurve 2848
20	IF15600	
19	SW 1	ProCurve 2848
18	S 18	DL360
17	S 17	DL360
16	S 16	DL360
15	S 15	DL360
14	S 14	DL360
13	S 13	DL360
12	S 12	DL360
11	S 11	DL360
10	S 10	DL360
9	S 9	DL360
8	S 8	DL360
7	S 7	DL360
6	S 6	DL360
5	S 5	DL360
4	S 4	DL360
3	S 3	DL360
2	S 2	DL360
1	S 1	DL360

Rack 1 (R1)

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

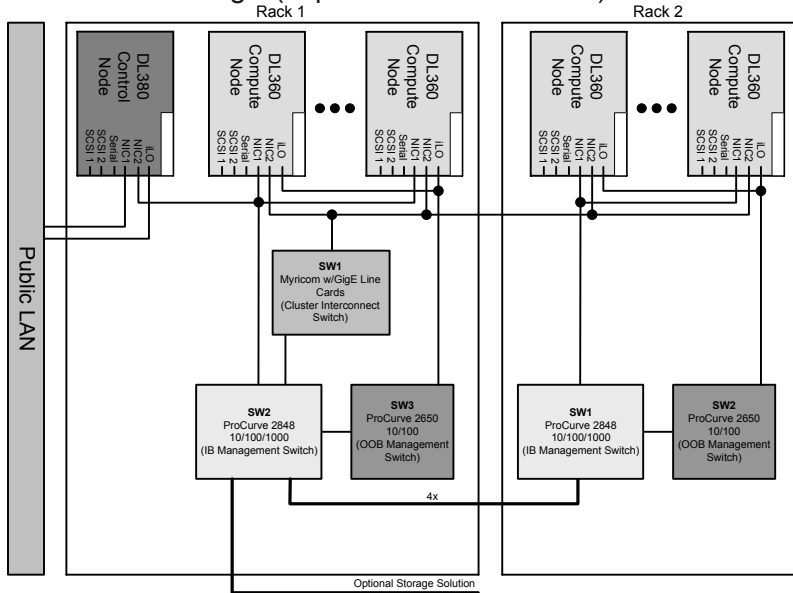
Notes: 1. # represents the number of compute nodes.

2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

Part Numbers	LC 2000 Series Parts List GigE	1 - 36 Nodes (36 Node Max)
<b>Factory Integration</b>		<b>Quantity</b>
325733-888	Level 4 Factory Integration	1
359578-B21	Configuration Resource Kit	1
<b>DL380G3 Control Node</b>		<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
<b>DL360G3 Compute Nodes</b>		<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM	
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#
<b>IB / OOB Management Interconnect</b>		<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	1
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1
<b>Compute Interconnect</b>		<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	1
257896-003	Myrinet 9-Slot Switch Frame, 5U, Max Support 64 Ports - M3-E64	
257896-004	Myrinet 17-Slot Switch Frame, 9U, Max Support 128 Ports - M3-E128	
356921-B21	Myrinet 8-Port GigE Switch Card With XBar - M3-SW16-8E *** Round up to the nearest integer.	
262818-001	Myrinet SNMP Monitoring Line Card, Dual Port - M3-M	
337807-001	Myrinet Front Blanking Panel - M3-BLANK *** Round down to the nearest integer.	
360363-B21	Myrinet Switch Rail Kit	
<b>Common Interconnect Parts</b>		<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	3
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	3
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	# * 3 + 1
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	1
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2
<b>Rack and Power Components</b>		<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet	1
221546-YYY	TFT5600RKM	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 8, then 1. If 8 < # <= 22, then 2. If # > 22, then 3.
246099-B21	Side Panel 42U, 10K Series All	1
246107-B21	Stabilizer 600mm, 10K Series All	1
248929-B21	Baying Kit, 10K Series All	
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(39 - #) / 10

# LC 2000 Series 32 Node GIGe DL360 Cluster Reference Design

## GIGe (expandable to 64 nodes)



- Notes: 1. # represents the number of compute nodes.  
2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

Part Numbers	LC 2000 Series Parts List GigE	1 - 32 Nodes (Expandable to 64 Nodes)	33 - 64 Nodes (64 Node Max)
<b>Factory Integration</b>		<b>Quantity</b>	<b>Quantity</b>
325733-888	Level 4 Factory Integration	1	2
359578-B21	Configuration Resource Kit	1	1
<b>DL380G3 Control Node</b>		<b>Quantity</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM		
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM		
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM		
<b>DL360G3 Compute Nodes</b>		<b>Quantity</b>	<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM		
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM		
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM		
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM		
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM		
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#	#
<b>IB / OOB Management Interconnect</b>		<b>Quantity</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	1	2
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1	2
<b>Compute Interconnect</b>		<b>Quantity</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U		
257896-003	Myrinet 9-Slot Switch Frame, 5U, Max Support 64 Ports - M3-E64	1	1
257896-004	Myrinet 17-Slot Switch Frame, 9U, Max Support 128 Ports - M3-E128		
356921-B21	Myrinet 8-Port GigE Switch Card With XBar - M3-SW16-8E *** Round up to the nearest integer.	# / 8	# / 8
262818-001	Myrinet SNMP Monitoring Line Card, Dual Port - M3-M	1	1
337807-001	Myrinet Front Blanking Panel - M3-BLANK *** Round down to the nearest integer.	8 - # / 8	8 - # / 8
360363-B21	Myrinet Switch Rail Kit	1	1
<b>Common Interconnect Parts</b>		<b>Quantity</b>	<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	2	4
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	3	5
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	If # < 20, then # * 3 + 1 else # * 2 + 22.	If # < 44, then # * 3 - 5 else # * 2 + 39.
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	If # < 20, then 1 else # - 19.	If # < 44, then 13 else # - 31.
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2	2
<b>Rack and Power Components</b>		<b>Quantity</b>	<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet	1	2
221546-YYY	TF5600RKM	1	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 6, then 1. If 8 < # <= 20, then 2. If # > 20, then 3.	If # <= 44, then 4. If 44 < # <= 58, then 5. If # > 58, then 6.
246099-B21	Side Panel 42U, 10K Series All	1	1
246107-B21	Stabilizer 600mm, 10K Series All	1	
248929-B21	Baying Kit, 10K Series All		1
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(39 - #) / 10	(81 - #) / 10

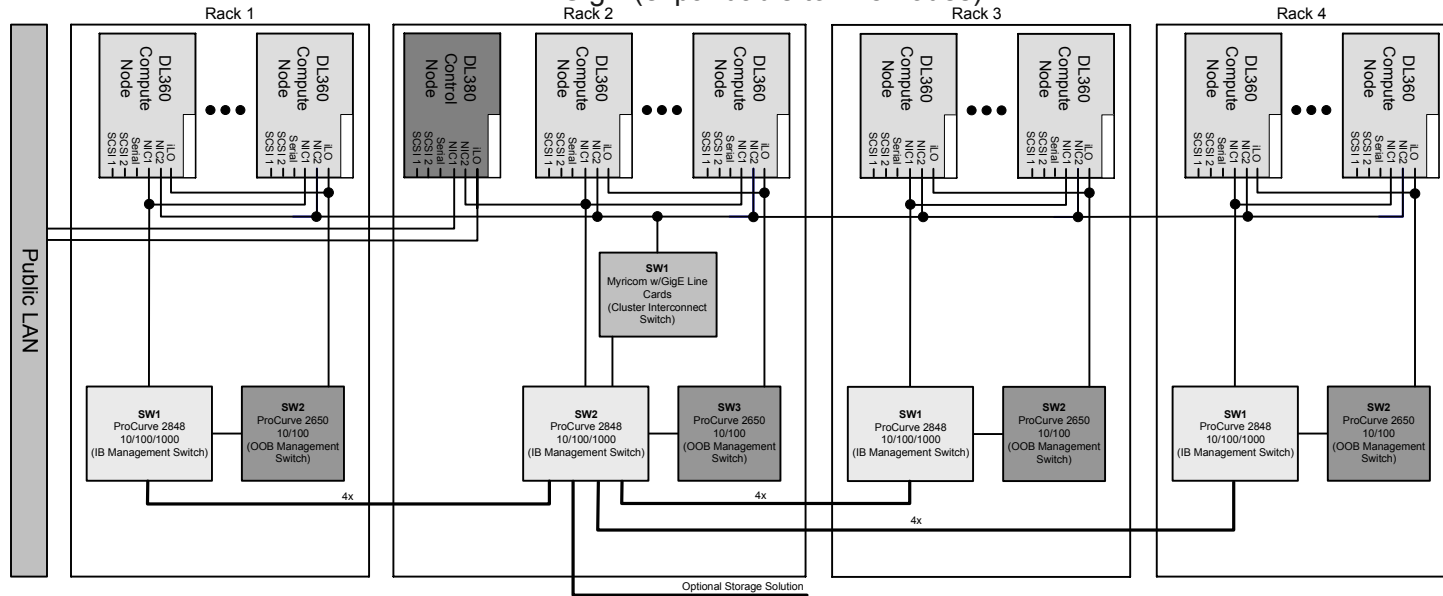
42	S 33	DL360
41	S 32	DL360
40	S 31	DL360
39	S 30	DL360
38	S 29	DL360
37	S 28	DL360
36	S 27	DL360
35	S 26	DL360
34	S 25	DL360
33	S 24	DL360
32	S 23	DL360
31	S 22	DL360
30	S 21	DL380
29	S 20	DL360
28	S 19	DL360
27	S 18	DL360
26	S 17	DL360
25	S 16	DL360
24	S 15	DL360
23	S 14	DL360
22	SW 3	ProCurve 2650
21	SW 2	ProCurve 2848
20	TF5600	
19	S 14	DL360
18	S 13	DL360
17	S 12	DL360
16	S 11	DL360
15	S 10	DL360
14	S 9	DL360
13	S 8	DL360
12	S 7	DL360
11	S 6	DL360
10	S 5	DL360
9	S 4	DL360
8	S 3	DL360
7	S 2	DL360
6	S 1	DL360
5	Myrinet 9 slot chassis w/GigE line cards	
4		
3		
2		
1		

42		
41		
40		
39		
38		
37		
36		
35		
34	S 32	Expansion
33	S 31	Expansion
32	S 30	Expansion
31	S 29	Expansion
30	S 28	Expansion
29	S 27	Expansion
28	S 26	Expansion
27	S 25	Expansion
26	S 24	Expansion
25	S 23	Expansion
24	S 22	Expansion
23	S 21	Expansion
22	SW 2	Expansion
21	SW 1	Expansion
20	S 20	Expansion
19	S 19	Expansion
18	S 18	Expansion
17	S 17	Expansion
16	S 16	Expansion
15	S 15	Expansion
14	S 14	Expansion
13	S 13	Expansion
12	S 12	Expansion
11	S 11	Expansion
10	S 10	Expansion
9	S 9	Expansion
8	S 8	Expansion
7	S 7	Expansion
6	S 6	Expansion
5	S 5	Expansion
4	S 4	Expansion
3	S 3	Expansion
2	S 2	Expansion
1	S 1	Expansion

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

# LC 2000 Series 64 Node GigE DL360 Cluster Reference Design

GigE (expandable to 128 nodes)



42	S 40	Expansion	42	S 29	DL360	42	S 40	Expansion	42			
41	S 39	Expansion	41	S 28	DL360	41	S 39	Expansion	41			
40	S 38	Expansion	40	S 27	DL360	40	S 38	Expansion	40			
39	S 37	Expansion	39	S 26	DL360	39	S 37	Expansion	39			
38	S 36	DL360	38	S 25	DL360	38	S 36	Expansion	38			
37	S 35	DL360	37	S 24	DL360	37	S 35	Expansion	37			
36	S 34	DL360	36	S 23	DL360	36	S 34	Expansion	36			
35	S 33	DL360	35	S 22	DL360	35	S 33	Expansion	35			
34	S 32	DL360	34	S 21	DL360	34	S 32	Expansion	34			
33	S 31	DL360	33	S 20	DL360	33	S 31	Expansion	33			
32	S 30	DL360	32	S 19	DL360	32	S 30	Expansion	32			
31	S 29	DL360	31	S 18	DL360	31	S 29	Expansion	31			
30	S 28	DL360	30	S 17	DL380	30	S 28	Expansion	30			
29	S 27	DL360	29	S 16	DL360	29	S 27	Expansion	29			
28	S 26	DL360	28	S 15	DL360	28	S 26	Expansion	28			
27	S 25	DL360	27	S 14	DL360	27	S 25	Expansion	27			
26	S 24	DL360	26	S 13	DL360	26	S 24	Expansion	26			
25	S 23	DL360	25	S 12	DL360	25	S 23	Expansion	25			
24	S 22	DL360	24	S 11	DL360	24	S 22	Expansion	24			
23	S 21	DL360	23	S 10	DL360	23	S 21	Expansion	23			
22	SW 2	ProCurve 2650	22	SW 3	ProCurve 2650	22	SW 2	Expansion	22	SW 2	Expansion	
21	SW 1	ProCurve 2848	21	SW 2	ProCurve 2848	21	SW 1	Expansion	21	SW 1	Expansion	
20	S 20	DL360	20	TFT5600		20	S 20	Expansion	20	S 20	Expansion	
19	S 19	DL360	19	S 10	DL360	19	S 19	Expansion	19	S 19	Expansion	
18	S 18	DL360	18	S 9	DL360	18	S 18	Expansion	18	S 18	Expansion	
17	S 17	DL360	17	S 8	DL360	17	S 17	Expansion	17	S 17	Expansion	
16	S 16	DL360	16	S 7	DL360	16	S 16	Expansion	16	S 16	Expansion	
15	S 15	DL360	15	S 6	DL360	15	S 15	Expansion	15	S 15	Expansion	
14	S 14	DL360	14	S 5	DL360	14	S 14	Expansion	14	S 14	Expansion	
13	S 13	DL360	13	S 4	DL360	13	S 13	Expansion	13	S 13	Expansion	
12	S 12	DL360	12	S 3	DL360	12	S 12	Expansion	12	S 12	Expansion	
11	S 11	DL360	11	S 2	DL360	11	S 11	Expansion	11	S 11	Expansion	
10	S 10	DL360	10	S 1	DL360	10	S 10	Expansion	10	S 10	Expansion	
9	S 9	DL360	9	Myricom 17 slot chassis w/GigE line cards		9	S 9	Expansion	9	S 9	Expansion	
8	S 8	DL360	8				8	S 8	Expansion	8	S 8	Expansion
7	S 7	DL360	7				7	S 7	Expansion	7	S 7	Expansion
6	S 6	DL360	6				6	S 6	Expansion	6	S 6	Expansion
5	S 5	DL360	5				5	S 5	Expansion	5	S 5	Expansion
4	S 4	DL360	4				4	S 4	Expansion	4	S 4	Expansion
3	S 3	DL360	3				3	S 3	Expansion	3	S 3	Expansion
2	S 2	DL360	2				2	S 2	Expansion	2	S 2	Expansion
1	S 1	DL360	1			1	S 1	Expansion	1	S 1	Expansion	
U	Rack 1 (R1)		U	Rack 2 (R2)		U	Rack 3 (R3)		U	Rack 4 (R4)		

# LC 2000 Series 64 Node GigE DL360 Cluster Reference Design

Notes: 1. # represents the number of compute nodes.

2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

Part Numbers	LC 2000 Series Parts List GigE	29 - 68 Nodes (Expandable to 128 Nodes)	69 - 108 Nodes (Expandable to 128 Nodes)	109 - 128 Nodes (128 Node Max)
	<b>Factory Integration</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
325733-888	Level 4 Factory Integration	2	3	4
359578-B21	Configuration Resource Kit	1	1	1
	<b>DL380G3 Control Node</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1	1	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM			
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM			
	<b>DL360G3 Compute Nodes</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#	#	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM			
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM			
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM			
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#	#	#
	<b>IB / OOB Management Interconnect</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	2	3	4
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	2	3	4
	<b>Compute Interconnect</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U			
257896-003	Myrinet 9-Slot Switch Frame, 5U, Max Support 64 Ports - M3-E64			
257896-004	Myrinet 17-Slot Switch Frame, 9U, Max Support 128 Ports - M3-E128	1	1	1
356921-B21	Myrinet 8-Port GigE Switch Card With XBar - M3-SW16-8E *** Round up to the nearest integer.	# / 8	# / 8	# / 8
262818-001	Myrinet SNMP Monitoring Line Card, Dual Port - M3-M	1	1	1
337807-001	Myrinet Front Blanking Panel - M3-BLANK *** Round down to the nearest integer.	16 - # / 8	16 - # / 8	16 - # / 8
360363-B21	Myrinet Switch Rail Kit	1	1	1
	<b>Common Interconnect Parts</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	4	6	8
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	5	7	9
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	If # < 40, then # * 3 - 5 else # * 2 + 35.	If # < 80, then # * 3 - 28 else # * 2 + 52.	# * 2 + 53
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	If # < 40, then 13 else # - 27.	If # < 80, then 41 else # - 39.	If # < 120, then # - 39 else 81.
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2	2	If # < 120, then 6 else # - 114.
	<b>Rack and Power Components</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet	2	3	4
221546-YYY	TFT5600RKM	1	1	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1	1	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 40, then 4. If 40 < # <= 54, then 5. If # > 54, then 6.	If # <= 80, then 7. If 80 < # <= 94, then 8. If # > 94, then 9.	If # <= 120, then 10 else 11.
246099-B21	Side Panel 42U, 10K Series All	1	1	1
246107-B21	Stabilizer 600mm, 10K Series All			
248929-B21	Baying Kit, 10K Series All	1	2	3
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(81 - #) / 10	(123 - #) / 10	(165 - #) / 10

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

# LC 2000 Series GigE DL360 Cluster Order Worksheet

Note: Please make copies for future use.

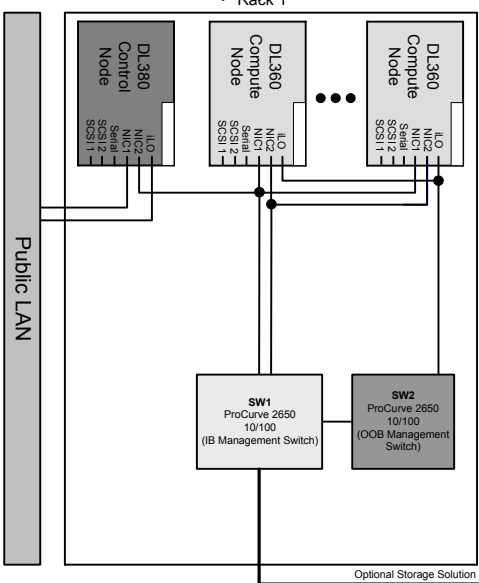
Part Numbers	LC 2000 Series Parts List GigE	Order
	<b>Factory Integration</b>	<b>Quantity</b>
325733-888	Level 4 Factory Integration	
359578-B21	Configuration Resource Kit	
	<b>DL380G3 Control Node</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
	<b>DL360G3 Compute Nodes</b>	<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM	
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	
	<b>IB / OOB Management Interconnect</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	
	<b>Compute Interconnect</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
257896-003	Myrinet 9-Slot Switch Frame, 5U, Max Support 64 Ports - M3-E64	
257896-004	Myrinet 17-Slot Switch Frame, 9U, Max Support 128 Ports - M3-E128	
356921-B21	Myrinet 8-Port GigE Switch Card With XBar - M3-SW16-8E	
262818-001	Myrinet SNMP Monitoring Line Card, Dual Port - M3-M	
337807-001	Myrinet Front Blanking Panel - M3-BLANK	
360363-B21	Myrinet Switch Rail Kit	
	<b>Common Interconnect Parts</b>	<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack	
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack	
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack	
	<b>Rack and Power Components</b>	<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet	
221546-YYY	TFT5600RKM	
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	
246099-B21	Side Panel 42U, 10K Series All	
246107-B21	Stabilizer 600mm, 10K Series All	
248929-B21	Baying Kit, 10K Series All	
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All	

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31



LC 2000 Series 16 Node Fast Ethernet DL360 Cluster Reference Design

Fast Ethernet (expandable to 22 nodes)



42	
41	
40	
39	
38	
37	
36	
35	
34	
33	
32	
31	
30	S 23 DL380
29	
28	
27	
26	
25	S 22 Expansion
24	S 21 Expansion
23	S 20 Expansion
22	SW 2 ProCurve 2650
21	SW 1 ProCurve 2650
20	TFT5600
19	S 19 Expansion
18	S 18 Expansion
17	S 17 Expansion
16	S 16 DL360
15	S 15 DL360
14	S 14 DL360
13	S 13 DL360
12	S 12 DL360
11	S 11 DL360
10	S 10 DL360
9	S 9 DL360
8	S 8 DL360
7	S 7 DL360
6	S 6 DL360
5	S 5 DL360
4	S 4 DL360
3	S 3 DL360
2	S 2 DL360
1	S 1 DL360

Rack 1 (R1)

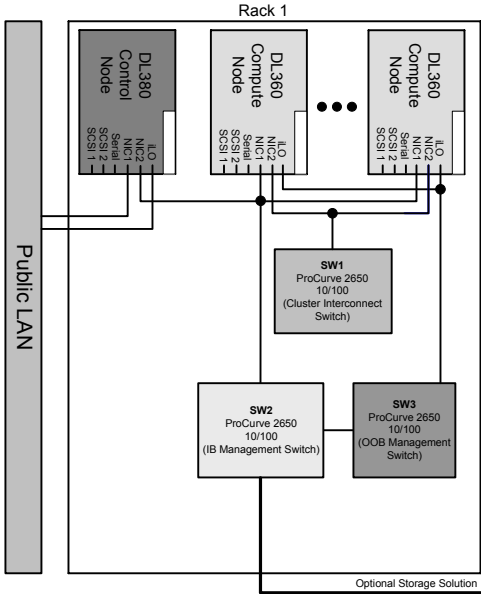
Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

- Notes: 1. # represents the number of compute nodes.  
2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

Part Numbers	LC 2000 Series Parts List Fast Ethernet	1 - 22 Nodes (22 Node Max)
Factory Integration		Quantity
325733-888	Level 4 Factory Integration	1
359578-B21	Configuration Resource Kit	1
DL380G3 Control Node		Quantity
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
DL360G3 Compute Nodes		Quantity
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM	
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#
IB / OOB Management Interconnect		Quantity
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1
Compute Interconnect		Quantity
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1
J4848A#WWW	Procurve 5372xl - 10/100-TX Switch, 8 Slot Modules, 5U, 3 Slots Filled	
J4820A	Procurve Switch XL 10/100-TX Switch Module, 24 Ports Per Module *** Round up to the nearest integer.	
Common Interconnect Parts		Quantity
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	2
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	2
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	# * 3 + 1
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	1
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2
Rack and Power Components		Quantity
245161-B22	Rack 10642 (42U) Shock Pallet	1
221546-YYY	TFT5600RKM	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 9, then 1 else 2
246099-B21	Side Panel 42U, 10K Series All	1
246107-B21	Stabilizer 600mm, 10K Series All	1
248929-B21	Baying Kit, 10K Series All	
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(39 - #) / 10

# LC 2000 Series 24 Node Fast Ethernet DL360 Cluster Reference Design

Fast Ethernet (expandable to 36 nodes)



42	S 37	Expansion
41	S 36	Expansion
40	S 35	Expansion
39	S 34	Expansion
38	S 33	Expansion
37	S 32	Expansion
36	S 31	Expansion
35	S 30	Expansion
34	S 29	Expansion
33	S 28	Expansion
32	S 27	Expansion
31	S 26	Expansion
30	S 25	DL380
29	S 24	DL360
28	S 23	DL360
27	S 22	DL360
26	S 21	DL360
25	S 20	DL360
24	S 19	DL360
23	S 18	DL360
22	SW 3	ProCurve 2650
21	SW 2	ProCurve 2650
20	TFT5600	
19	SW 1	ProCurve 2650
18	S 18	DL360
17	S 17	DL360
16	S 16	DL360
15	S 15	DL360
14	S 14	DL360
13	S 13	DL360
12	S 12	DL360
11	S 11	DL360
10	S 10	DL360
9	S 9	DL360
8	S 8	DL360
7	S 7	DL360
6	S 6	DL360
5	S 5	DL360
4	S 4	DL360
3	S 3	DL360
2	S 2	DL360
1	S 1	DL360

U Rack 1 (R1)

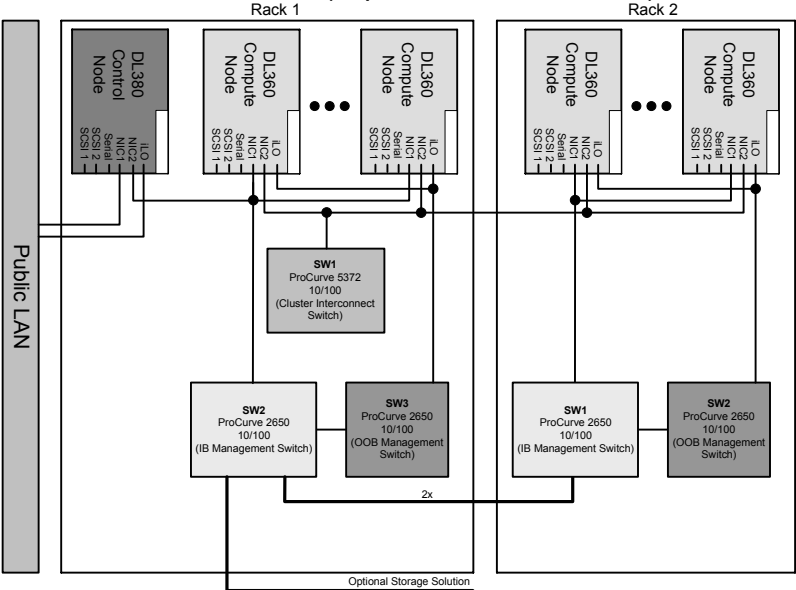
Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

Notes: 1. # represents the number of compute nodes.  
2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

Part Numbers	LC 2000 Series Parts List Fast Ethernet	1 - 36 Nodes (36 Node Max)
Factory Integration		Quantity
325733-888	Level 4 Factory Integration	1
359578-B21	Configuration Resource Kit	1
DL380G3 Control Node		Quantity
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
DL360G3 Compute Nodes		Quantity
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM	
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#
IB / OOB Management Interconnect		Quantity
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	2
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	
Compute Interconnect		Quantity
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1
J4848A#WWW	Procurve 5372xl - 10/100-TX Switch, 8 Slot Modules, 5U, 3 Slots Filled	
J4820A	Procurve Switch XL 10/100-TX Switch Module, 24 Ports Per Module *** Round up to the nearest integer.	
Common Interconnect Parts		Quantity
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	3
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	3
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	# * 3 + 1
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	1
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2
Rack and Power Components		Quantity
245161-B22	Rack 10642 (42U) Shock Pallet	1
221546-YYY	TFT5600RKM	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 8, then 1. If 8 < # <= 22, then 2. If # > 22, then 3.
246099-B21	Side Panel 42U, 10K Series All	1
246107-B21	Stabilizer 600mm, 10K Series All	1
248929-B21	Baying Kit, 10K Series All	
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(39 - #) / 10

# LC 2000 Series 32 Node Fast Ethernet DL360 Cluster Reference Design

Fast Ethernet (expandable to 72 nodes)



42	S 33	DL360
41	S 32	DL360
40	S 31	DL360
39	S 30	DL360
38	S 29	DL360
37	S 28	DL360
36	S 27	DL360
35	S 26	DL360
34	S 25	DL360
33	S 24	DL360
32	S 23	DL360
31	S 22	DL360
30	S 21	DL380
29	S 20	DL360
28	S 19	DL360
27	S 18	DL360
26	S 17	DL360
25	S 16	DL360
24	S 15	DL360
23	S 14	DL360
22	SW 3	ProCurve 2650
21	SW 2	ProCurve 2650
20	TF15600	
19	S 14	DL360
18	S 13	DL360
17	S 12	DL360
16	S 11	DL360
15	S 10	DL360
14	S 9	DL360
13	S 8	DL360
12	S 7	DL360
11	S 6	DL360
10	S 5	DL360
9	S 4	DL360
8	S 3	DL360
7	S 2	DL360
6	S 1	DL360
5		
4	SW 1	ProCurve 5372
3		
2		
1		

42	S 40	Expansion
41	S 39	Expansion
40	S 38	Expansion
39	S 37	Expansion
38	S 36	Expansion
37	S 35	Expansion
36	S 34	Expansion
35	S 33	Expansion
34	S 32	Expansion
33	S 31	Expansion
32	S 30	Expansion
31	S 29	Expansion
30	S 28	Expansion
29	S 27	Expansion
28	S 26	Expansion
27	S 25	Expansion
26	S 24	Expansion
25	S 23	Expansion
24	S 22	Expansion
23	S 21	Expansion
22	SW 2	Expansion
21	SW 1	Expansion
20	S 20	Expansion
19	S 19	Expansion
18	S 18	Expansion
17	S 17	Expansion
16	S 16	Expansion
15	S 15	Expansion
14	S 14	Expansion
13	S 13	Expansion
12	S 12	Expansion
11	S 11	Expansion
10	S 10	Expansion
9	S 9	Expansion
8	S 8	Expansion
7	S 7	Expansion
6	S 6	Expansion
5	S 5	Expansion
4	S 4	Expansion
3	S 3	Expansion
2	S 2	Expansion
1	S 1	Expansion

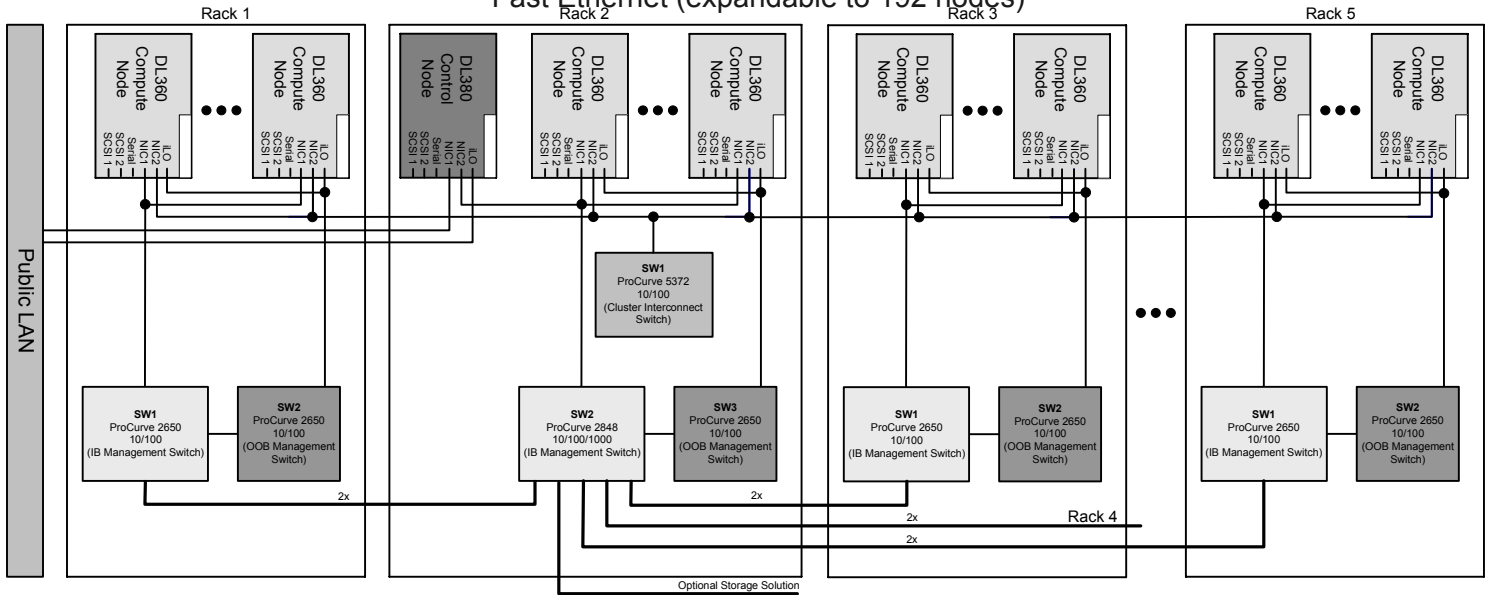
Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

- Notes: 1. # represents the number of compute nodes.  
2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

LC 2000 Series Parts List		1 - 32 Nodes (Expandable to 72 Nodes)	33 - 72 Nodes (72 Node Max)
Fast Ethernet		Quantity	Quantity
Factory Integration			
325733-888	Level 4 Factory Integration	1	2
359578-B21	Configuration Resource Kit	1	1
DL380G3 Control Node		Quantity	Quantity
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM		
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM		
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM		
DL360G3 Compute Nodes		Quantity	Quantity
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM		
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM		
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM		
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM		
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM		
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#	#
IB / OOB Management Interconnect		Quantity	Quantity
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U		
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	2	4
Compute Interconnect		Quantity	Quantity
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U		
J4848A#WWW	Procurve 5372xl - 10/100-TX Switch, 8 Slot Modules, 5U, 3 Slots Filled	1	1
J4820A	Procurve Switch XL 10/100-TX Switch Module, 24 Ports Per Module *** Round up to the nearest integer.		
Common Interconnect Parts		Quantity	Quantity
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	2	4
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	3	5
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	If # < 20, then # * 3 + 1 else # * 2 + 21.	If # < 44, then # * 3 - 8 else # * 2 + 36.
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	If # < 20, then 1 else # - 19.	If # < 44, then 13 else # - 31.
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2	2
Rack and Power Components		Quantity	Quantity
245161-B22	Rack 10642 (42U) Shock Pallet	1	2
221546-YYY	TFT5600RKM	1	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 6, then 1. If 8 < # <= 20, then 2. If # > 20, then 3.	If # <= 44, then 4. If 44 < # <= 58, then 5. If # > 58, then 6.
246099-B21	Side Panel 42U, 10K Series All	1	1
246107-B21	Stabilizer 600mm, 10K Series All	1	
248929-B21	Baying Kit, 10K Series All		1
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(39 - #) / 10	(81 - #) / 10

# LC 2000 Series 64 Node Fast Ethernet DL360 Cluster Reference Design

## Fast Ethernet (expandable to 192 nodes)



42	S 40	Expansion
41	S 39	Expansion
40	S 38	Expansion
39	S 37	Expansion
38	S 36	DL360
37	S 35	DL360
36	S 34	DL360
35	S 33	DL360
34	S 32	DL360
33	S 31	DL360
32	S 30	DL360
31	S 29	DL360
30	S 28	DL360
29	S 27	DL360
28	S 26	DL360
27	S 25	DL360
26	S 24	DL360
25	S 23	DL360
24	S 22	DL360
23	S 21	DL360
22	SW 2	ProCurve 2650
21	SW 1	ProCurve 2848
20	S 20	DL360
19	S 19	DL360
18	S 18	DL360
17	S 17	DL360
16	S 16	DL360
15	S 15	DL360
14	S 14	DL360
13	S 13	DL360
12	S 12	DL360
11	S 11	DL360
10	S 10	DL360
9	S 9	DL360
8	S 8	DL360
7	S 7	DL360
6	S 6	DL360
5	S 5	DL360
4	S 4	DL360
3	S 3	DL360
2	S 2	DL360
1	S 1	DL360

Rack 1 (R1)

42	S 29	DL360
41	S 28	DL360
40	S 27	DL360
39	S 26	DL360
38	S 25	DL360
37	S 24	DL360
36	S 23	DL360
35	S 22	DL360
34	S 21	DL360
33	S 20	DL360
32	S 19	DL360
31	S 18	DL360
30	S 17	DL380
29	S 16	DL360
28	S 15	DL360
27	S 14	DL360
26	S 13	DL360
25	S 12	DL360
24	S 11	DL360
23	SW 3	ProCurve 2650
22	SW 2	ProCurve 2848
21	TF15600	
20	S 10	DL360
19	S 9	DL360
18	S 8	DL360
17	S 7	DL360
16	S 6	DL360
15	S 5	DL360
14	S 4	DL360
13	S 3	DL360
12	S 2	DL360
11	S 1	DL360
10	Myricom 17 slot chassis w/Myrinet line cards	
9		
8		
7		
6		
5		
4		
3		
2		
1		

Rack 2 (R2)

42	S 40	Expansion
41	S 39	Expansion
40	S 38	Expansion
39	S 37	Expansion
38	S 36	Expansion
37	S 35	Expansion
36	S 34	Expansion
35	S 33	Expansion
34	S 32	Expansion
33	S 31	Expansion
32	S 30	Expansion
31	S 29	Expansion
30	S 28	Expansion
29	S 27	Expansion
28	S 26	Expansion
27	S 25	Expansion
26	S 24	Expansion
25	S 23	Expansion
24	S 22	Expansion
23	S 21	Expansion
22	SW 2	Expansion
21	SW 1	Expansion
20	S 20	Expansion
19	S 19	Expansion
18	S 18	Expansion
17	S 17	Expansion
16	S 16	Expansion
15	S 15	Expansion
14	S 14	Expansion
13	S 13	Expansion
12	S 12	Expansion
11	S 11	Expansion
10	S 10	Expansion
9	S 9	Expansion
8	S 8	Expansion
7	S 7	Expansion
6	S 6	Expansion
5	S 5	Expansion
4	S 4	Expansion
3	S 3	Expansion
2	S 2	Expansion
1	S 1	Expansion

Rack 3 (R3)

42		
41		
40		
39		
38		
37		
36		
35		
34		
33		
32		
31		
30		
29		
28		
27		
26		
25		
24		
23		
22	SW 2	Expansion
21	SW 1	Expansion
20	S 20	Expansion
19	S 19	Expansion
18	S 18	Expansion
17	S 17	Expansion
16	S 16	Expansion
15	S 15	Expansion
14	S 14	Expansion
13	S 13	Expansion
12	S 12	Expansion
11	S 11	Expansion
10	S 10	Expansion
9	S 9	Expansion
8	S 8	Expansion
7	S 7	Expansion
6	S 6	Expansion
5	S 5	Expansion
4	S 4	Expansion
3	S 3	Expansion
2	S 2	Expansion
1	S 1	Expansion

Rack 4 (R4)

# LC 2000 Series 64 Node Fast Ethernet DL360 Cluster Reference Design

Notes: 1. # represents the number of compute nodes.

2. Please refer to the server options table for adding processors, memory, disks, network adapters, ...

Part Numbers	LC 2000 Series Parts List Fast Ethernet	33 - 72 Nodes (Expandable to 192 Nodes)	73 - 112 Nodes (Expandable to 192 Nodes)	113 - 152 Nodes (Expandable to 192 Nodes)	153 - 192 Nodes (Expandable to 192 Nodes)
	Factory Integration	Quantity	Quantity	Quantity	Quantity
325733-888	Level 4 Factory Integration	2	3	4	5
359578-B21	Configuration Resource Kit	1	1	1	1
	DL380G3 Control Node	Quantity	Quantity	Quantity	Quantity
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1	1	1	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM				
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM				
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM				
	DL360G3 Compute Nodes	Quantity	Quantity	Quantity	Quantity
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	#	#	#	#
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM				
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM				
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM				
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM				
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM				
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	#	#	#	#
	IB / OOB Management Interconnect	Quantity	Quantity	Quantity	Quantity
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	1	1	1	1
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	3	5	7	9
	Compute Interconnect	Quantity	Quantity	Quantity	Quantity
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	1	1	1	1
J4848A#WWW	Procurve 5372xl - 10/100-TX Switch, 8 Slot Modules, 5U, 3 Slots Filled				
J4820A	Procurve Switch XL 10/100-TX Switch Module, 24 Ports Per Module *** Round up to the nearest integer.	# / 24 - 3		# / 24 - 3	# / 24 - 3
	Common Interconnect Parts	Quantity	Quantity	Quantity	Quantity
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	4	6	8	10
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	5	7	9	11
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	If # < 44, then # * 3 - 8 else # * 2 + 36.	If # < 84, then # * 3 - 33 else # * 2 + 51.	# * 2 + 52	# * 2 + 53
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	If # < 44, then 13 else # - 31.	If # < 84, then 41 else # - 43.	If # < 124, then # - 43 else 81.	81
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 4 and round up to the nearest integer.	2	2	If # < 124, then 4 else # - 120.	# - 118
	Rack and Power Components	Quantity	Quantity	Quantity	Quantity
245161-B22	Rack 10642 (42U) Shock Pallet	2	3	4	5
221546-YYY	TFT5600RKM	1	1	1	1
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	1	1	1	1
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	If # <= 44, then 4. If 44 < # <= 58, then 5. If # > 58, then 6.	If # <= 84, then 7. If 84 < # <= 98, then 8. If # > 98, then 9.	If # <= 124, then 10. If 124 < # <= 138, then 11. If # > 138, then 12.	If # <= 164, then 13. If 164 < # <= 178, then 14. If # > 178, then 15.
246099-B21	Side Panel 42U, 10K Series All	1	1	1	1
246107-B21	Stabilizer 600mm, 10K Series All				
248929-B21	Baying Kit, 10K Series All	1	2	3	4
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All *** Round up to the nearest integer.	(81 - #) / 10	(123 - #) / 10	(165 - #) / 10	(207 - #) / 10

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

# LC 2000 Series Fast Ethernet DL360 Cluster Order Worksheet

Note: Please make copies for future use.

Part Numbers	LC 1000 Series Parts List Fast Ethernet	Order
	<b>Factory Integration</b>	<b>Quantity</b>
325733-888	Level 4 Factory Integration	
359578-B21	Configuration Resource Kit	
	<b>DL380G3 Control Node</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
	<b>DL360G3 Compute Nodes</b>	<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM	
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM	
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches	
	<b>IB / OOB Management Interconnect</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	
	<b>Compute Interconnect</b>	<b>Quantity</b>
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U	
J4848A#WWW	Procurve 5372xl - 10/100-TX Switch, 8 Slot Modules, 5U, 3 Slots Filled	
J4820A	Procurve Switch XL 10/100-TX Switch Module, 24 Ports Per Module	
	<b>Common Interconnect Parts</b>	<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack	
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack	
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack	
	<b>Rack and Power Components</b>	<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet	
221546-YYY	TFT5600RKM	
169989-001	Keyboard/Mouse/Monitor Extension Cable, US	
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	
246099-B21	Side Panel 42U, 10K Series All	
246107-B21	Stabilizer 600mm, 10K Series All	
248929-B21	Baying Kit, 10K Series All	
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All	

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

## LC 2000 Series DL380 and DL360 Options

Note: Please make copies for future use.

Part Numbers	LC 2000 Series Parts List Options	Order
	<b>DL380G3 Control Node</b>	<b>Quantity</b>
293048-B21	Fan Kit	
313054-B21	Hot Plug Redundant Power Supply	
333714-B21	1P-3.2GHz 1MB Cache 533MHz FSB Processor Option Kit	
333713-B21	1P-3.06GHz 1MB Cache 533MHz FSB Processor Option Kit	
257916-B21	1P-3.06GHz 512KB Cache 533MHz FSB Processor Option Kit	
257915-B21	1P-2.8GHz 512KB Cache 400MHz FSB Processor Option Kit	
300678-B21	512MB PC2100 Memory Kit (2X256MB)	
300679-B21	1024MB PC2100 Memory Kit (2X512MB)	
300680-B21	2048MB PC2100 Memory Kit (2X1024MB)	
300682-B21	4096MB PC2100 Memory Kit (2X2048MB)	
286713-B22	36.4GB 10K HDD U320	
286714-B22	72.8GB 10K HDD U320	
286716-B22	146.8GB 10K HDD U320	
286775-B22	18.2GB 15K HDD U320	
286776-B22	36.4GB 15K HDD U320	
286778-B22	72.8GB 15K HDD U320	
313881-B21	NC7170 Dual Port 1000T Gigabit Server Adapter	
290563-B21	NC7771 PCI-X 10/100/1000-T Server Adapter	
263825-B21	iLO Advanced Pack All	
	<b>DL360G3 Compute Nodes</b>	<b>Quantity</b>
353831-B21	1P-3.2GHz 2MB Cache 533MHz Processor Option Kit	
345103-B21	1P-3.2GHz 1MB Cache 533MHz Processor Option Kit	
337056-B21	1P-3.06GHz 1MB Cache 533MHz Processor Option Kit	
322472-B21	1P-3.06GHz 512KB Cache 533MHz Processor Option Kit	
359384-B21	1P-2.8GHz 1MB Cache 533MHz Processor Option Kit	
292892-B21	1P-2.8GHz 512KB Cache 533MHz Processor Option Kit	
300678-B21	512MB PC2100 Memory Kit (2X256MB)	
300679-B21	1024MB PC2100 Memory Kit (2X512MB)	
300680-B21	2048MB PC2100 Memory Kit (2X1024MB)	
300682-B21	4096MB PC2100 Memory Kit (2X2048MB)	
286713-B22	36.4GB 10K HDD U320	
286714-B22	72.8GB 10K HDD U320	
286716-B22	146.8GB 10K HDD U320	
286775-B22	18.2GB 15K HDD U320	
286776-B22	36.4GB 15K HDD U320	
286778-B22	72.8GB 15K HDD U320	
313881-B21	NC7170 Dual Port 1000T Gigabit Server Adapter	
290563-B21	NC7771 PCI-X 10/100/1000-T Server Adapter	
263825-B21	iLO Advanced Pack All	

## LC 2000 Series Software Options

Notes: 1. # represents the number of compute nodes.  
2. Please make multiple copies for future use.

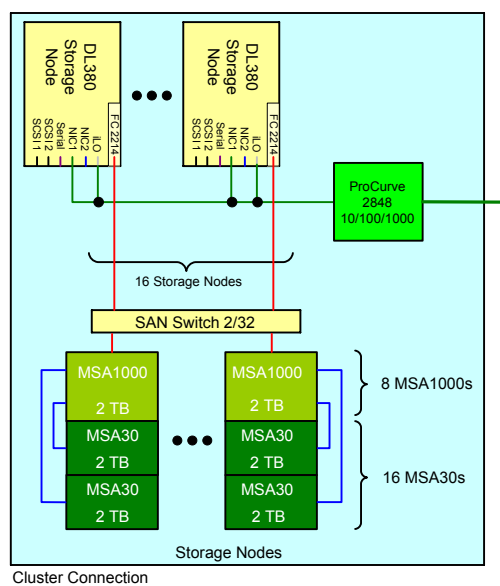
Part Numbers	LC 2000 Series Software Options	Order		
	<b>Red Hat - 1 Year</b>	<b>Control</b>	<b>Compute</b>	<b>Quantity</b>
365979-002	Red Hat Enterprise Linux ES 3 1-2 CPU, 1 Year (Americas)	1		
351374-B21	Red Hat Enterprise Linux ES 3 1-2 CPU, 1 Year (EMEA)			
365985-002	Red Hat Enterprise Linux AS 3 1-2 CPU, 1 Year (Americas)			
351372-B21	Red Hat Enterprise Linux AS 3 1-2 CPU, 1 Year (EMEA)			
366313-B21	Red Hat WS 3 / High Performance Computing (32-bit), Base 8 Pack and Media, 1 Year		1	
359971-B21	Red Hat WS 3 / High Performance Computing (32-bit), Additional 8 Pack, 1 Year *** Round up to the nearest integer.		(# - 8) / 8	
	<b>Red Hat - 3 Year</b>	<b>Control</b>	<b>Compute</b>	<b>Quantity</b>
365980-002	Red Hat Enterprise Linux ES 3 1-2 CPU, 3 Year (Americas)	1		
351375-B21	Red Hat Enterprise Linux ES 3 1-2 CPU, 3 Year (EMEA)			
365986-002	Red Hat Enterprise Linux AS 3 1-2 CPU, 3 Year (Americas)			
351373-B21	Red Hat Enterprise Linux AS 3 1-2 CPU, 3 Year (EMEA)			
366316-B21	Red Hat WS 3 / High Performance Computing (32-bit), Base 8 Pack and Media, 3 Year		1	
359972-B21	Red Hat WS 3 / High Performance Computing (32-bit), Additional 8 Pack, 3 Year *** Round up to the nearest integer.		(# - 8) / 8	
	<b>SUSE - 1 Year</b>	<b>Control</b>	<b>Compute</b>	<b>Quantity</b>
344074-B21	SLES 8 1-2 CPU, 1 Year	1		
366319-B21	SLES 8 / High Performance Computing (32-bit), Base 8 Pack and Media, 1 Year		1	
359973-B21	SLES 8 / High Performance Computing (32-bit), Additional 8 Pack, 1 Year *** Round up to the nearest integer.		(# - 8) / 8	
	<b>SUSE - 3 Year</b>	<b>Control</b>	<b>Compute</b>	<b>Quantity</b>
344075-B21	SLES 8 1-2 CPU, 3 Year	1		
366322-B21	SLES 8 / High Performance Computing (32-bit), Base 8 Pack and Media, 3 Year		1	
359974-B21	SLES 8 / High Performance Computing (32-bit), Additional 8 Pack, 3 Year *** Round up to the nearest integer.		(# - 8) / 8	
	<b>Microsoft Windows</b>	<b>Control</b>	<b>Compute</b>	<b>Quantity</b>
339105-B21	Microsoft Windows Server 2003, Standard Edition, 5 Client Access Licenses	1		
339233-B21	Microsoft Windows Server 2003, Enterprise Edition, 25 Client Access Licenses			
354663-B21	Microsoft Windows Server 2003, Standard Edition for High Performance Computing, Media and 16-License Pack *** Round up to the nearest integer.		# / 16	

Note: Scali Manage/Connect is supported on Linux operating systems only.

	<b>Scali</b>	<b>Control</b>	<b>Compute</b>	<b>Quantity</b>
359960-B21	Scali Manage/Connect for TCP/IP, Media and Control Node License	1		
359962-B21	Scali Manage/Connect for Myrinet, Media and Control Node License			
366382-B21	Scali Manage/Connect, Compute Node License		#	



# LC 2000 Series Fibre Channel GFS (16 node - 48 TB)



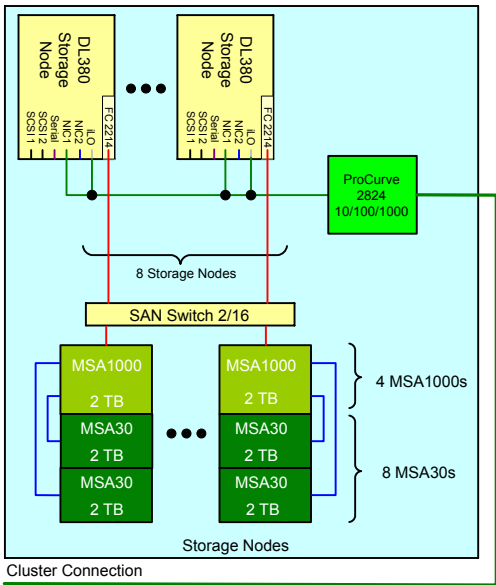
42	Empty	Empty	Empty
41	Empty	Empty	Empty
40	Empty	Empty	Empty
39	Empty	MSA1000	MSA1000
38	Empty	2 TB	2 TB
37	Empty	MSA30	MSA30
36	Empty	2 TB	2 TB
35	Empty	MSA30	MSA30
34	ProCurve 2848	2 TB	2 TB
33	FC SW	MSA30	MSA30
32	DL380	2 TB	2 TB
31	Storage Node	MSA30	MSA30
30	DL380	2 TB	2 TB
29	Storage Node	MSA30	MSA30
28	DL380	2 TB	2 TB
27	Storage Node	MSA30	MSA30
26	DL380	2 TB	2 TB
25	Storage Node	MSA30	MSA30
24	DL380	2 TB	2 TB
23	Storage Node	MSA30	MSA30
22	DL380	2 TB	2 TB
21	Storage Node	MSA30	MSA30
20	DL380	2 TB	2 TB
19	Storage Node	MSA30	MSA30
18	DL380	2 TB	2 TB
17	Storage Node	MSA30	MSA30
16	DL380	2 TB	2 TB
15	Storage Node	MSA30	MSA30
14	DL380	2 TB	2 TB
13	Storage Node	MSA30	MSA30
12	DL380	2 TB	2 TB
11	Storage Node	MSA30	MSA30
10	DL380	2 TB	2 TB
9	Storage Node	MSA30	MSA30
8	DL380	2 TB	2 TB
7	Storage Node	MSA30	MSA30
6	DL380	2 TB	2 TB
5	Storage Node	MSA30	MSA30
4	DL380	2 TB	2 TB
3	Storage Node	MSA30	MSA30
2	DL380	2 TB	2 TB
1	Storage Node	MSA30	MSA30

Part Number Key		
	WWW	XXX
US	ABA	001
EMEA	ABB	421

Note: Please refer to the storage subsystem options table for adding processors, memory, disks, network adapters, rack and power, ...

Part Numbers	Storage Subsystem Parts List	FC GFS 16 node - 48 TB
DL380G3 Storage Node		Quantity
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	16
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
281541-B21	FCA2214 (FC HBA)	16
273914-B21	SA 6404 (SCSI HBA)	
Storage Components		Quantity
302969-B21	MSA30 SB w/1 12' VHDCI cable	16
201724-B21	MSA500 w/2 6' VHDCI cables & 128MB cache	
201723-B22	MSA1000 w/256MB cache, I/O module & 1 SFP	8
Management/Storage Interconnect		Quantity
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	1
J4903A#WWW	ProCurve 2824 - 10/100/1000-T Switch, 24 Ports, 1U	
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	1
288247-B21	MSA1000 SAN Switch 2/8 (Ships with 4 SFPs)	
322118-B21	SAN Switch 2/16	
240603-B21	SAN Switch 2/32	1
221470-B21	2 Gb SFP SW Transceiver	48
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	2
221692-B21	Fiber Cable, LC-LC, Optical, 2M	8
221692-B22	Fiber Cable, LC-LC, Optical, 5M	8
221692-B23	Fiber Cable, LC-LC, Optical, 15M	8
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	16
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	16
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	4

LC 2000 Series Fibre Channel GFS (8 node - 24 TB)



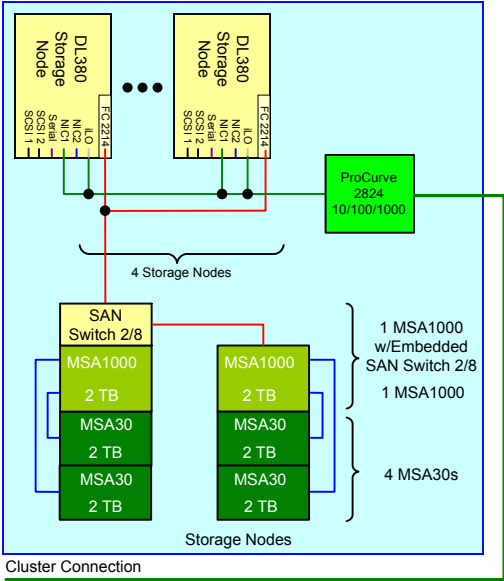
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34	Empty	2 TB
33	Empty	Empty
32	Empty	MSA30
31	Empty	2 TB
30	Empty	Empty
29	Empty	MSA1000
28	Empty	2 TB
27	Empty	Empty
26	Empty	Empty
25	Empty	MSA30
24	Empty	2 TB
23	Empty	Empty
22	Empty	MSA30
21	Empty	2 TB
20	Empty	Empty
19	Empty	Empty
18	ProCurve 2824	MSA1000
17	FC SW	2 TB
16	DL380	Empty
15	Storage Node	MSA30
14	DL380	2 TB
13	Storage Node	Empty
12	DL380	MSA30
11	Storage Node	2 TB
10	DL380	Empty
9	Storage Node	MSA1000
8	DL380	2 TB
7	Storage Node	Empty
6	DL380	Empty
5	Storage Node	MSA30
4	DL380	2 TB
3	Storage Node	Empty
2	DL380	MSA30
1	Storage Node	2 TB

Part Number Key		
	WWW	XXX
US	ABA	001
EMEA	ABB	421

Note: Please refer to the storage subsystem options table for adding processors, memory, disks, network adapters, rack and power, ...

Part Numbers	Storage Subsystem Parts List	FC GFS 8 node - 24TB
DL380G3 Storage Node		Quantity
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	8
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
281541-B21	FCA2214 (FC HBA)	8
273914-B21	SA 6404 (SCSI HBA)	
Storage Components		Quantity
302969-B21	MSA30 SB w/1 12' VHDCI cable	8
201724-B21	MSA500 w/2 6' VHDCI cables & 128MB cache	
201723-B22	MSA1000 w/256MB cache, I/O module & 1 SFP	4
Management/Storage Interconnect		Quantity
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4903A#WWW	ProCurve 2824 - 10/100/1000-T Switch, 24 Ports, 1U	1
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	1
288247-B21	MSA1000 SAN Switch 2/8 (Ships with 4 SFPs)	
322118-B21	SAN Switch 2/16	1
240603-B21	SAN Switch 2/32	
221470-B21	2 Gb SFP SW Transceiver	24
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	2
221692-B21	Fiber Cable, LC-LC, Optical, 2M	6
221692-B22	Fiber Cable, LC-LC, Optical, 5M	6
221692-B23	Fiber Cable, LC-LC, Optical, 15M	
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	8
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	8
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	4

LC 2000 Series Fibre Channel GFS (4 node - 12 TB)



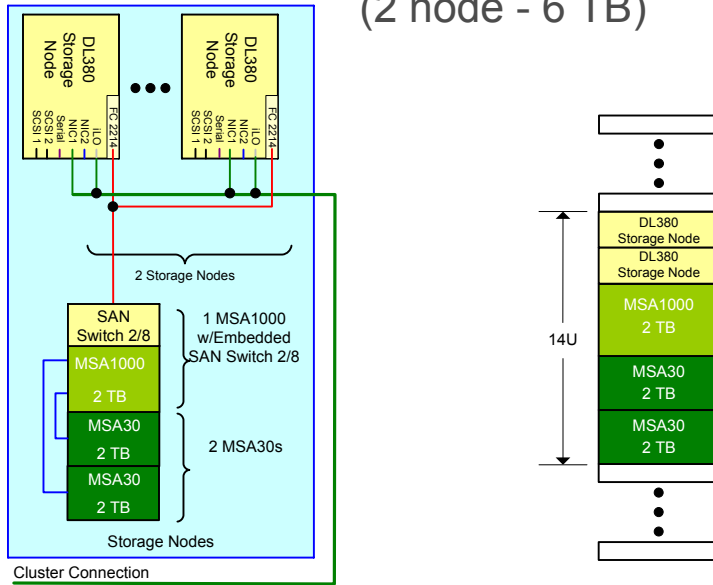
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38	Empty
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36	Empty
35	Empty
34	Empty
33	Empty
32	Empty
31	Empty
30	Empty
29	ProCurve 2824
28	DL380 Storage Node
27	DL380 Storage Node
26	DL380 Storage Node
25	DL380 Storage Node
24	DL380 Storage Node
23	DL380 Storage Node
22	DL380 Storage Node
21	DL380 Storage Node
20	MSA1000 2 TB
19	MSA1000 2 TB
18	MSA1000 2 TB
17	MSA1000 2 TB
16	MSA1000 2 TB
15	MSA1000 2 TB
14	MSA1000 2 TB
13	MSA1000 2 TB
12	MSA1000 2 TB
11	MSA1000 2 TB
10	MSA1000 2 TB
9	MSA1000 2 TB
8	MSA1000 2 TB
7	MSA1000 2 TB
6	MSA1000 2 TB
5	MSA1000 2 TB
4	MSA1000 2 TB
3	MSA1000 2 TB
2	MSA1000 2 TB
1	MSA1000 2 TB

Part Number Key		
	WWW	XXX
US	ABA	001
EMEA	ABB	421

Note: Please refer to the storage subsystem options table for adding processors, memory, disks, network adapters, rack and power, ...

Part Numbers	Storage Subsystem Parts List	FC GFS 4 node - 12 TB
DL380G3 Storage Node		Quantity
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	4
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
281541-B21	FCA2214 (FC HBA)	4
273914-B21	SA 6404 (SCSI HBA)	
Storage Components		Quantity
302969-B21	MSA30 SB w/1 12' VHDCI cable	4
201724-B21	MSA500 w/2 6' VHDCI cables & 128MB cache	
201723-B22	MSA1000 w/256MB cache, I/O module & 1 SFP	2
Management/Storage Interconnect		Quantity
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4903A#WWW	ProCurve 2824 - 10/100/1000-T Switch, 24 Ports, 1U	1
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	1
288247-B21	MSA1000 SAN Switch 2/8 (Ships with 4 SFPs)	1
322118-B21	SAN Switch 2/16	
240603-B21	SAN Switch 2/32	
221470-B21	2 Gb SFP SW Transceiver	2
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	1
221692-B21	Fiber Cable, LC-LC, Optical, 2M	3
221692-B22	Fiber Cable, LC-LC, Optical, 5M	
221692-B23	Fiber Cable, LC-LC, Optical, 15M	
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	8
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	4

## LC 2000 Series Fibre Channel GFS (2 node - 6 TB)

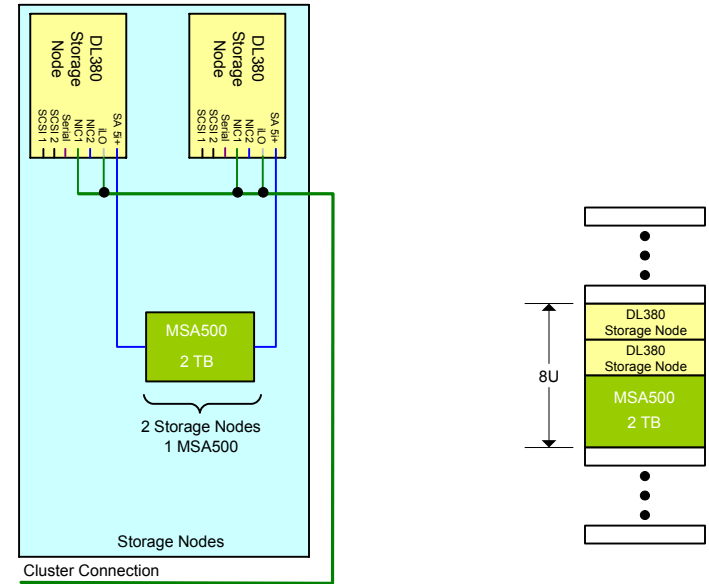


Note: Please refer to the storage subsystem options table for adding processors, memory, disks, network adapters, rack and power, ...

Part Numbers	Storage Subsystem Parts List	FC GFS 2 Node - 6TB
	<b>DL380G3 Storage Node</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	2
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
281541-B21	FCA2214 (FC HBA)	2
273914-B21	SA 6404 (SCSI HBA)	
	<b>Storage Components</b>	<b>Quantity</b>
302969-B21	MSA30 SB w/1 12' VHDCI cable	2
201724-B21	MSA500 w/2 6' VHDCI cables & 128MB cache	
201723-B22	MSA1000 w/256MB cache, I/O module & 1 SFP	1
	<b>Management/Storage Interconnect</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4903A#WWW	ProCurve 2824 - 10/100/1000-T Switch, 24 Ports, 1U	
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	
288247-B21	MSA1000 SAN Switch 2/8 (Ships with 4 SFPs)	1
322118-B21	SAN Switch 2/16	
240603-B21	SAN Switch 2/32	
221470-B21	2 Gb SFP SW Transceiver	
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	
221692-B21	Fiber Cable, LC-LC, Optical, 2M	2
221692-B22	Fiber Cable, LC-LC, Optical, 5M	
221692-B23	Fiber Cable, LC-LC, Optical, 15M	
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	4

Part Number Key		
	WWW	XXX
US	ABA	001
EMEA	ABB	421

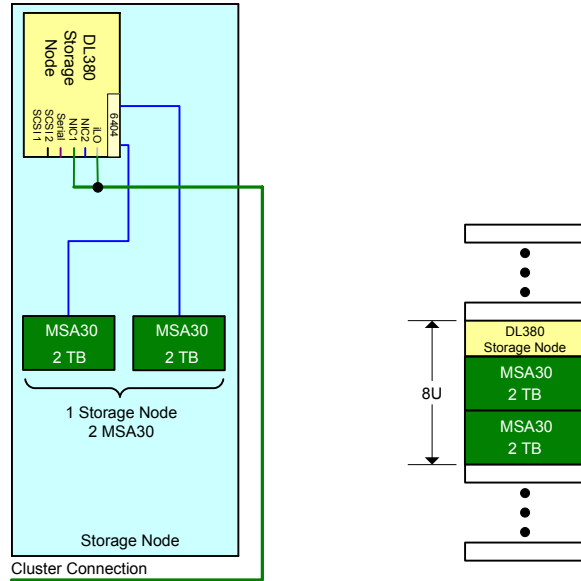
## LC 2000 Series SCSI High Availability NFS 2TB



Note: Please refer to the storage subsystem options table for adding processors, memory, disks, network adapters, rack and power, ...

Part Numbers	Storage Subsystem Parts List	SCSI HA NFS 2TB
	<b>DL380G3 Storage Node</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	2
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
281541-B21	FCA2214 (FC HBA)	
273914-B21	SA 6404 (SCSI HBA)	
	<b>Storage Components</b>	<b>Quantity</b>
302969-B21	MSA30 SB w/1 12' VHDCI cable	
201724-B21	MSA500 w/2 6' VHDCI cables & 128MB cache	1
201723-B22	MSA1000 w/256MB cache, I/O module & 1 SFP	
	<b>Management/Storage Interconnect</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4903A#WWW	ProCurve 2824 - 10/100/1000-T Switch, 24 Ports, 1U	
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	
288247-B21	MSA1000 SAN Switch 2/8 (Ships with 4 SFPs)	
322118-B21	SAN Switch 2/16	
240603-B21	SAN Switch 2/32	
221470-B21	2 Gb SFP SW Transceiver	
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	
221692-B21	Fiber Cable, LC-LC, Optical, 2M	
221692-B22	Fiber Cable, LC-LC, Optical, 5M	
221692-B23	Fiber Cable, LC-LC, Optical, 15M	
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	4

## LC 2000 Series SCSI NFS 4TB

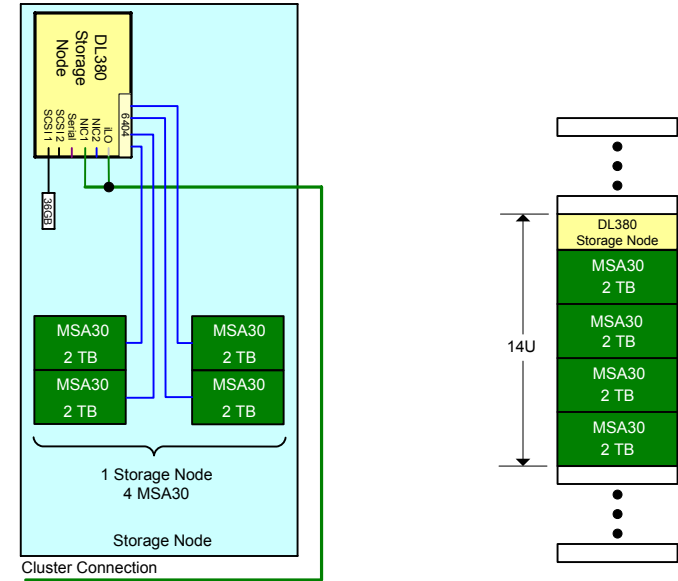


Note: Please refer to the storage subsystem options table for adding processors, memory, disks, network adapters, rack and power, ...

Part Numbers	Storage Subsystem Parts List	SCSI NFS 4TB
<b>DL380G3 Storage Node</b>		<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
281541-B21	FCA2214 (FC HBA)	
273914-B21	SA 6404 (SCSI HBA)	1
<b>Storage Components</b>		<b>Quantity</b>
302969-B21	MSA30 SB w/ 12' VHCDI cable	2
201724-B21	MSA500 w/2 6' VHDCI cables & 128MB cache	
201723-B22	MSA1000 w/256MB cache, I/O module & 1 SFP	
<b>Management/Storage Interconnect</b>		<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4903A#WWW	ProCurve 2824 - 10/100/1000-T Switch, 24 Ports, 1U	
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	
288247-B21	MSA1000 SAN Switch 2/8 (Ships with 4 SFPs)	
322118-B21	SAN Switch 2/16	
240603-B21	SAN Switch 2/32	
221470-B21	2 Gb SFP SW Transceiver	
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	
221692-B21	Fiber Cable, LC-LC, Optical, 2M	
221692-B22	Fiber Cable, LC-LC, Optical, 5M	
221692-B23	Fiber Cable, LC-LC, Optical, 15M	
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	2

Part Number Key		
	WWW	XXX
US	ABA	001
EMEA	ABB	421

## LC 2000 Series SCSI NFS 8TB



Note: Please refer to the storage subsystem options table for adding processors, memory, disks, network adapters, rack and power, ...

Part Numbers	Storage Subsystem Parts List	SCSI NFS 8TB
<b>DL380G3 Storage Node</b>		<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM	1
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM	
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM	
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM	
281541-B21	FCA2214 (FC HBA)	
273914-B21	SA 6404 (SCSI HBA)	1
<b>Storage Components</b>		<b>Quantity</b>
302969-B21	MSA30 SB w/ 12' VHCDI cable	4
201724-B21	MSA500 w/2 6' VHDCI cables & 128MB cache	
201723-B22	MSA1000 w/256MB cache, I/O module & 1 SFP	
<b>Management/Storage Interconnect</b>		<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U	
J4903A#WWW	ProCurve 2824 - 10/100/1000-T Switch, 24 Ports, 1U	
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount	
288247-B21	MSA1000 SAN Switch 2/8 (Ships with 4 SFPs)	
322118-B21	SAN Switch 2/16	
240603-B21	SAN Switch 2/32	
221470-B21	2 Gb SFP SW Transceiver	
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT	
221692-B21	Fiber Cable, LC-LC, Optical, 2M	
221692-B22	Fiber Cable, LC-LC, Optical, 5M	
221692-B23	Fiber Cable, LC-LC, Optical, 15M	
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack *** For US, divide Quantity by 8 and round up to the nearest integer.	2

## LC 2000 Series Storage Subsystem Options

Note: Please make multiple copies for future use.

Part Numbers	Storage Subsystem Options	Order
	<b>DL380G3</b>	<b>Quantity</b>
263825-B21	iLO Advanced Pack ALL	
293048-B21	Fan Kit	
333714-B21	1P-3.2GHz 1MB Cache 533MHz FSB Processor Option	
333713-B21	1P-3.06GHz 1MB Cache 533MHz FSB Processor Option	
257916-B21	1P-3.06GHz 512KB Cache 533MHz FSB Processor	
257915-B21	1P-2.8GHz 512KB Cache 400MHz FSB Processor Option	
300678-B21	512MB PC2100 Memory Kit (2X256MB)	
300679-B21	1024MB PC2100 Memory Kit (2X512MB)	
300680-B21	2048MB PC2100 Memory Kit (2X1024MB)	
300682-B21	4096MB PC2100 Memory Kit (2X2048MB)	
313054-B21	Hot Plug Redundant Power Supply	
	<b>Disk Drives</b>	<b>Quantity</b>
286713-B22	36.4 GB U320 10K	
286714-B22	72.8 GB U320 10K	
286716-B22	146.8 GB U320 10K	
286775-B22	18.2 GB U320 15K	
286776-B22	36.4 GB U320 15K	
286778-B22	72.8 GB U320 15K	
	<b>Storage Options</b>	<b>Quantity</b>
153506-B21	128MB Controller cache module	
254786-B21	256 MB Controller cache module	
	<b>Rack and Power Components</b>	<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet	
221546-YYY	TFT5600RKM	
169989-001	K/M/M Ext Cable US	
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage	
246099-B21	Side Panel 42U, 10K Series All	
246107-B21	Stabilizer 600mm, 10K Series All	
248929-B21	Baying Kit, 10K Series All	
253214-B21	Blanking Panel, 10 Per Set, 1U, 10K Series All	

Part Number Key		
	YYY	ZZZ
US	001	D72
EMEA	B31	B31

# LC 2000 Series Myrinet DL360 Cluster Upgrade Worksheet

Note: Please make copies for future use.

Part Numbers	LC 2000 Series Parts List Myrinet Upgrade	Current Configuration	New Configuration	Parts Needed (New Config - Current Config)
	<b>DL380G3 Control Node</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM			
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM			
	<b>DL360G3 Compute Nodes</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM			
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM			
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM			
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
257894-006	Myrinet Fiber PCI-X Single Port Adapter Card - M3F-PCIXD-2			
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches			
	<b>IB / OOB Management Interconnect</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U			
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U			
	<b>Compute Interconnect</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
257896-002	Myrinet 5-Slot Switch Frame, 3U, Max Support 32 Ports - M3-E32			
257896-003	Myrinet 9-Slot Switch Frame, 5U, Max Support 64 Ports - M3-E64			
257896-004	Myrinet 17-Slot Switch Frame, 9U, Max Support 128 Ports - M3-E128			
257895-001	Myrinet 8-Port Fiber Switch Card With XBar - M3-SW16-8F			
262818-001	Myrinet SNMP Monitoring Line Card, Dual Port - M3-M			
337807-001	Myrinet Front Blanking Panel - M3-BLANK			
360363-B21	Myrinet Switch Rail Kit			
	<b>Common Interconnect Parts</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount			
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT			
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack			
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack			
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack			
221692-B22	Fiber Cable, LC-LC, OPTICAL, 5M			
221692-B23	Fiber Cable, LC-LC, OPTICAL, 15M			
	<b>Rack and Power Components</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet			
221546-YYY	TFT5600RKM			
169989-001	Keyboard/Mouse/Monitor Extension Cable, US			
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage			
246099-B21	Side Panel 42U, 10K Series All			
246107-B21	Stabilizer 600mm, 10K Series All			
248929-B21	Baying Kit, 10K Series All			
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All			

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31

# LC 2000 Series GigE DL360 Cluster Upgrade Worksheet

Note: Please make copies for future use.

Part Numbers	LC 2000 Series Parts List GigE Upgrade	Current Configuration	New Configuration	Parts Needed (New Config - Current Config)
	<b>DL380G3 Control Node</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM			
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM			
	<b>DL360G3 Compute Nodes</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM			
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM			
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM			
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches			
	<b>IB / OOB Management Interconnect</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U			
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U			
	<b>Compute Interconnect</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U			
257896-003	Myrinet 9-Slot Switch Frame, 5U, Max Support 64 Ports - M3-E64			
257896-004	Myrinet 17-Slot Switch Frame, 9U, Max Support 128 Ports - M3-E128			
356921-B21	Myrinet 8-Port GigE Switch Card With XBar - M3-SW16-8E			
262818-001	Myrinet SNMP Monitoring Line Card, Dual Port - M3-M			
337807-001	Myrinet Front Blanking Panel - M3-BLANK			
360363-B21	Myrinet Switch Rail Kit			
	<b>Common Interconnect Parts</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount			
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT			
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack			
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack			
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack			
	<b>Rack and Power Components</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet			
221546-YYY	TFT5600RKM			
169989-001	Keyboard/Mouse/Monitor Extension Cable, US			
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage			
246099-B21	Side Panel 42U, 10K Series All			
246107-B21	Stabilizer 600mm, 10K Series All			
248929-B21	Baying Kit, 10K Series All			
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All			

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31



# LC 2000 Series Fast Ethernet DL360 Cluster Upgrade Worksheet

Note: Please make copies for future use.

Part Numbers	LC 2000 Series Parts List Fast Ethernet Upgrade	Current Configuration	New Configuration	Parts Needed (New Config - Current Config)
	<b>DL380G3 Control Node</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
333705-XXX	DL380G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
333704-XXX	DL380G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
310587-XXX	DL380G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X512MB RAM			
349201-XXX	DL380G3 1P-2.8GHz 512KB Cache 400MHz FSB, 2X512MB RAM			
	<b>DL360G3 Compute Nodes</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
345101-XXX	DL360G3 1P-3.2GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
353829-XXX	DL360G3 1P-3.2GHz 2MB Cache 533MHz FSB, 2X512MB RAM			
337054-XXX	DL360G3 1P-3.06GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
322470-XXX	DL360G3 1P-3.06GHz 512KB Cache 533MHz FSB, 2X256MB RAM			
292889-XXX	DL360G3 1P-2.8GHz 512KB Cache 533MHz FSB, 2X256MB RAM			
359383-XXX	DL360G3 1P-2.8GHz 1MB Cache 533MHz FSB, 2X512MB RAM			
142257-B28	Power Cord, SPT-2, IEC-C13 IEC-C14, 20 inches			
	<b>IB / OOB Management Interconnect</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
J4904A#WWW	ProCurve 2848 - 10/100/1000-T Switch, 48 Ports, 1U			
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U			
	<b>Compute Interconnect</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
J4899A#WWW	ProCurve 2650 - 10/100-T Switch, 50 Ports, 1U			
J4848A#WWW	Procurve 5372xl - 10/100-TX Switch, 8 Slot Modules, 5U, 3 Slots Filled			
J4820A	Procurve Switch XL 10/100-TX Switch Module, 24 Ports Per Module			
	<b>Common Interconnect Parts</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
356578-B21	1U Switch Rail Kit, 10K Series Rack Mount			
142257-006	Power Cord, IEC-C13 IEC-C14, 4.5FT			
BN26M-03 or 263474-B22	Shielded CAT 5E Cable (EMEA), 3M, 1 Per or CAT 5E Cable (US), 6 FT, 8 Per Pack			
BN26M-04 or 263474-B23	Shielded CAT 5E Cable (EMEA), 4M, 1 Per or CAT 5E Cable (US), 12 FT, 8 Per Pack			
BN26M-07 or 263474-B24	Shielded CAT 5E Cable (EMEA), 7M, 1 Per or CAT 5E Cable (US), 20 FT, 4 Per Pack			
	<b>Rack and Power Components</b>	<b>Quantity</b>	<b>Quantity</b>	<b>Quantity</b>
245161-B22	Rack 10642 (42U) Shock Pallet			
221546-YYY	TFT5600RKM			
169989-001	Keyboard/Mouse/Monitor Extension Cable, US			
252663-ZZZ	Modular PDU, 24A (US) or 32A (EMEA), High Voltage			
246099-B21	Side Panel 42U, 10K Series All			
246107-B21	Stabilizer 600mm, 10K Series All			
248929-B21	Baying Kit, 10K Series All			
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All			
248929-B21	Baying Kit, 10K Series All			
253214-B21	Blanking Panels, 10 Per Set, 1U, 10K Series All			

Part Number Key				
	WWW	XXX	YYY	ZZZ
US	ABA	001	001	D72
EMEA	ABB	421	B31	B31